



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
လျှပ်စစ်နှင့်စွမ်းအင်ဝန်ကြီးဌာန

စာအမှတ်၊ MOEE-၂/(၁၅)/(Powergen)(၁၂၄၇၅)/၂၀၁၈

ရက်စွဲ ၊ ၂၀၁၈ ခုနှစ်၊ ဩဂုတ်လ ၁၃ ရက်

သို့

မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်

အကြောင်းအရာ။ ကျောက်ဆည်ဒေသတွင်တည်ဆောက်မည့် ၁၄၅ မဂ္ဂါဝပ် ဓာတ်အားပေးစက်ရုံ အတွက် လုပ်ငန်းဆောင်ရွက်မည့် Powergen Kyaukse Company Limited မှ Gas Engine များနှင့် ဆက်စပ်ပစ္စည်းများအချိန်မီတင်သွင်းနိုင်ရန်အတွက် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်မှ ကြိုတင်ခွင့်ပြုမိန့်ထုတ်ပေးနိုင်ပါရန် ထောက်ခံ တင်ပြခြင်းကိစ္စ

ရည်ညွှန်းချက် ။ ဤဝန်ကြီးဌာန၏ ၁၀-၈-၂၀၁၈ ရက်စွဲပါစာအမှတ် MOEE-၂ / (၁၅) / (c) / (NIHC) / (၁၂၃၂၄) / ၂၀၁၈

၁။ မန္တလေးတိုင်းဒေသကြီး၊ ကျောက်ဆည်ဒေသ၊ ဘဲလင်း ၂၃၀ ဧကခွဲ ဓာတ်အားခွဲရုံတွင် Powergen Kyaukse Company Limited မှ ၁၄၅ မဂ္ဂါဝပ် Gas Engine ဓာတ်အားပေးစက်ရုံ တည်ဆောက်ပြီး မြန်မာနိုင်ငံအတွင်းလျှပ်စစ်ဓာတ်အားထုတ်လုပ်ရောင်းချရန်အတွက်လုပ်ထုံးလုပ်နည်းများနှင့် အညီ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်သို့လျှောက်ထားမှုအပေါ် လိုအပ်သလိုကူညီဆောင်ရွက်ပေးနိုင်ပါ ရန် ရည်ညွှန်းချက်ပါစာဖြင့် ညှိနှိုင်းမေတ္တာရပ်ခံခဲ့ပါသည်။

၂။ အဆိုပါကုမ္ပဏီနှင့် (၅) နှစ်စာဓာတ်အားဝယ်ယူရေးစာချုပ် (Power Purchase Agreement) ချုပ်ဆိုနိုင်ရေး သက်ဆိုင်ရာဌာနများ၏သဘောထားမှတ်ချက်နှင့်အညီပြင်ဆင်ပြီးဖြစ်သည့် PPA စာချုပ် (မူကြမ်း) အားလက်မှတ်ရေးထိုးခွင့်ပြုပါရန် ပြည်ထောင်စုအစိုးရအဖွဲ့၊ စီးပွားရေးရာကော်မတီသို့ (၉-၈-၂၀၁၈)ရက်တွင် အမှာစာတင်ပြထားပါသည်။

၃။ ဤဝန်ကြီးဌာနမှ Powergen Kyaukse Company Limited သို့ Letter of Acceptance (LOA) ထုတ်ပေးခဲ့သော ၇-၅-၂၀၁၈ ရက်မှစ၍ ကုမ္ပဏီသည် စီမံကိန်းလုပ်ငန်းများစတင်အကောင်အထည် ဖော်ဆောင်ရွက်ခဲ့ရာ လက်ရှိတွင် စီမံကိန်းမြေနေရာအား ရှင်းလင်းပြီးစီးပြီဖြစ်၍ Gas Engine များ တည်ဆောက်နိုင်ရန် Civil Works များဆောင်ရွက်လျက်ရှိပါသည်။ ထို့အပြင် စီမံကိန်းတွင် တပ်ဆင် အသုံးပြုမည့် Gas Engine (၈) လုံးအား Wartsila ကုမ္ပဏီမှ အီတလီနိုင်ငံတွင် တည်ဆောက်ထုတ်လုပ် ခဲ့ပြီးဖြစ်၍ ၃-၈-၂၀၁၈ ရက်နေ့တွင် အီတလီနိုင်ငံ၊ Trieste ဆိပ်ကမ်းမှ သင်္ဘောတင်၍ မြန်မာနိုင်ငံသို့ တင်ပို့ခဲ့ပြီး ၂၀၁၈ ခုနှစ် ဩဂုတ်လကုန်တွင် မြန်မာနိုင်ငံ၊ ရန်ကုန်ဆိပ်ကမ်းသို့ ဆိုက်ရောက်မည် ဖြစ်ပါသည်။

၄။ သို့ဖြစ်ပါ၍ ကျောက်ဆည်ဒေသတွင်တည်ဆောက်မည့် ၁၄၅ မဂ္ဂါဝပ် ဓာတ်အားပေးစက်ရုံ အတွက် လုပ်ငန်းဆောင်ရွက်မည့် Powergen Kyaukse Company Limited မှ Gas Engine များနှင့် ဆက်စပ်ပစ္စည်းများ အချိန်မီ တင်သွင်းနိုင်ရန်အတွက် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်မှ ကြိုတင် ခွင့်ပြုမိန့် ထုတ်ပေးနိုင်ရေး လိုအပ်သလိုကူညီဆောင်ရွက်ပေးနိုင်ပါရန် ညှိနှိုင်းမေတ္တာရပ်ခံအပ်ပါသည်။



ပြည်ထောင်စုဝန်ကြီး (ကုမ္ပဏီ)
(ဒေါက်တာထွန်းနိုင်၊ ဒုတိယဝန်ကြီး)



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ

လျှပ်စစ်နှင့်စွမ်းအင်ဝန်ကြီးဌာန

စာအမှတ်: MOEE-၂/ (၁၅)/ (င)/ (NIHC)/ (၁၂၃၂၄) /၂၀၁၈
ရက်စွဲ ၂၀၁၈ ခုနှစ်၊ ဩဂုတ်လ ၁၀ ရက်

သို့

မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်

အကြောင်းအရာ။ Powergen Kyaukse Company Limited မှ ကျောက်ဆည်ဒေသတွင် အကောင်အထည်ဖော်ဆောင်ရွက်မည့် ၁၄၅ မဂ္ဂါဝပ်ဓာတ်အားပေးစက်ရုံ တည်ဆောက်ခြင်းလုပ်ငန်းအတွက် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်သို့ ခွင့်ပြုမိန့် လျှောက်ထားခြင်းအားထောက်ခံတင်ပြခြင်းကိစ္စ

၁။ မန္တလေးတိုင်းဒေသကြီး၊ ကျောက်ဆည်ဒေသ၊ ဘဲလင်းရှိ ၂၃၀ ကေစွီ ဓာတ်အားခွဲရုံတွင် ၁၄၅ မဂ္ဂါဝပ် Gas Engine ဓာတ်အားပေးစက်ရုံမှ ဓာတ်အားထုတ်လုပ်နိုင်ရေး Powergen Kyaukse Company Limited မှ အကောင်အထည်ဖော်ဆောင်ရွက်လျက်ရှိပါသည်။ အဆိုပါကုမ္ပဏီနှင့် (၅)နှစ်စာ ဓာတ်အားဝယ်ယူရေးစာချုပ် (Power Purchase Agreement) ချုပ်ဆိုနိုင်ရေး သက်ဆိုင်ရာ ဌာနကြီးများ၏ သဘောထားမှတ်ချက်နှင့်အညီ ပြင်ဆင်ပြီးဖြစ်သည့် PPA စာချုပ်(မူကြမ်း) အား လက်မှတ်ရေးထိုးခွင့်ပြုပါရန် ပြည်ထောင်စုအစိုးရအဖွဲ့၊ စီးပွားရေးရာကော်မတီသို့ ၉-၈-၂၀၁၈ ရက် တွင် အမှာစာတင်ပြထားပါသည်။ ထို့အပြင် မြန်မာနိုင်ငံ၏ လျှပ်စစ်ဓာတ်အားလိုအပ်ချက်အပေါ် မူတည်၍ ဓာတ်အားဝယ်ယူရေးစာချုပ်အား သက်တမ်းတိုးမြှင့်ချုပ်ဆိုသွားမည်ဖြစ်ပါသည်။

၂။ ထိုသို့ဆောင်ရွက်နေစဉ်ကာလအတွင်း သက်ဆိုင်ရာကုမ္ပဏီမှ စီမံကိန်းလုပ်ငန်းများ စတင် အကောင်အထည်ဖော်နိုင်ရန်အတွက် Letter of Acceptance (LoA) အား ၇-၅-၂၀၁၈ ရက်တွင် ဤဝန်ကြီးဌာနမှ ထုတ်ပေးထားပြီးဖြစ်ပါသည်။

၃။ သို့ဖြစ်ပါ၍ Powergen Kyaukse Company Limited မှ ဓာတ်အားပေးစက်ရုံတည် ဆောက်ပြီး မြန်မာနိုင်ငံအတွင်း လျှပ်စစ်ဓာတ်အားထုတ်လုပ်ရောင်းချရန်အတွက် လုပ်ထုံးလုပ်နည်း များနှင့်အညီ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်သို့ လျှောက်ထားမှုအပေါ် လိုအပ်သလိုကူညီ ဆောင်ရွက်ပေးနိုင်ပါရန် ညှိနှိုင်းမေတ္တာရပ်ခံအပ်ပါသည်။

ပူးတွဲလျက်။ Powergen Kyaukse Company Limited မှ အဆိုပြုတင်ပြချက် (၁) အုပ်

ပြည်ထောင်စုဝန်ကြီး (MOE)
(တင်မောင်ဦး၊ အမြဲတမ်းအတွင်းဝန်)

မိတ္တူကို

လျှပ်စစ်စွမ်းအားစီမံရေးဦးစီးဌာန

လျှပ်စစ်ဓာတ်အားထုတ်လုပ်ရေးလုပ်ငန်း

ရုံးလက်ခံ/ မျှောစာတွဲ

မန္တလေးတိုင်းဒေသကြီး၊ ကျောက်ဆည်ခရိုင်၊

ခဉ်ကိုင်မြို့နယ်၊ ဘဲလင်းဓါတ်အားခွဲရုံးဝန်းအတွင်း

145.49 MW ဓါတ်အားပေးစက်ရုံ တည်ဆောက်ပြီး

ဓါတ်အားထုတ်လုပ်သည့် လုပ်ငန်းအတွက်

POWERGEN KYAUKSE COMPANY LIMITED

မှ

မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်

သို့

အဆိုပြုတင်ပြချက်

၂၀၁၈ ခုနှစ် ဩဂုတ်လ

မာတိကာ

- ၁။ လျှပ်စစ်နှင့်စွမ်းအင်ဝန်ကြီးဌာနသို့ အဆိုပြုချက် (၁)
- ၂။ တင်ဒါ/စီမံကိန်းဆိုင်ရာ အချက်အလက်များ (၂)
- ၃။ ဓါတ်အားဝယ်ယူရေး သဘောတူညီချက်စာချုပ် (မူကြမ်း) (၃)
- ၄။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်သို့ (၄)
- (က) ရင်းနှီးမြှုပ်နှံသူ၏ အဆိုပြုချက် - ပုံစံ (၂)
- (ခ) အခွန်ကင်းလွတ်ခွင့် (သို့) သက်သာခွင့် လျှောက်ထားချက်- ပုံစံ (၆)
- (ဂ) နောက်ဆက်တွဲ စာရင်းဇယားများ
- (၁) ရင်းနှီးမြှုပ်နှံမှုပမာဏနှင့် စက်ပစ္စည်းကရိယာစာရင်း
- (၂) ငွေကြေးဆိုင်ရာတွက်ချက်မှု စာရင်းဇယားများ
- ၅။ ဝန်ထမ်းအင်အားစာရင်း (၅)
- ၆။ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးအစီအစဉ် (၆)
- ၇။ မီးဘေးကြိုတင်ကာကွယ်ရေးအစီအစဉ် (၇)
- ၈။ လူမှုဖူလုံရေး၊ သက်သာချောင်ချိမှု ဆောင်ရွက်မည့်အစီအမံများ (၈)
- ၉။ ဝန်ခံကတိပြုချက်များ (၉)
- ၁၀။ ကုမ္ပဏီဆိုင်ရာအထောက်အထားများ (၁၀)
- (က) ဘဏ်အထောက်အထားများ
- (ခ) ကုမ္ပဏီမှတ်ပုံတင်/ သင်းဖွဲ့မှတ်တမ်းနှင့် သင်းဖွဲ့စည်းမျဉ်းများ

လှုပ်စစ်နှင် ခွမ်းအင်ဝန်ကြီးဌာနသို့ အဆိုပြုချက်



စာအမှတ်။ ။ NIHC/KS-135/MIC-23/2018

ရက်စွဲ။ ။ ၂၀၁၈ခုနှစ်၊ ဩဂုတ်လ (၆) ရက်

သို့

ဦးဆောင်ညွှန်ကြားရေးမှူး
လျှပ်စစ်ဓါတ်အားထုတ်လုပ်ရေးလုပ်ငန်း
လျှပ်စစ်နှင့် စွမ်းအင်ဝန်ကြီးဌာန
နေပြည်တော်

အကြောင်းအရာ။ မန္တလေးတိုင်း၊ ကျောက်ဆည်ခရိုင်၊ စဉ့်ကိုင်မြို့နယ် (230 kV) ဘဲလင်းဓါတ်အားခွဲရုံဝန်းအတွင်း တည်ဆောက်မည့် (145.49MW) ဓါတ်အားပေးစက်ရုံ စီမံကိန်းလုပ်ငန်းအတွက် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှု ဥပဒေနှင့်အညီ ခွင့်ပြုမိန့်နှင့် သက်သာခွင့်တို့အတွက် အဆိုပြုတင်ပြချက်။

ရည်ညွှန်းချက်။ လျှပ်စစ်နှင့်စွမ်းအင်ဝန်ကြီးဌာန၏ (၇-၅-၂၀၁၈) ရက်စွဲပါ Letter of Acceptance

၁။ ကျွန်တော်များ The NIHC Consortium သည် မန္တလေးတိုင်း၊ ကျောက်ဆည်ခရိုင်၊ စဉ့်ကိုင်မြို့နယ် (230 kV) ဘဲလင်းဓါတ်အားခွဲရုံဝန်းအတွင်း (145.49 MW) ဓါတ်အားပေးစက်ရုံ တည်ဆောက်ပြီး ဓါတ်အားထုတ်လုပ်ရေးစီမံကိန်း အတွက် တင်ဒါ အောင်မြင်ခဲ့ပြီး စီမံကိန်းလုပ်ငန်းများ စတင်ဆောင်ရွက်နိုင်ရန် ရည်ညွှန်းပါ Letter of Acceptance ကို (၇-၅-၂၀၁၈) ရက်နေ့တွင် လက်မှတ်ရေးထိုးခဲ့ပြီး ဖြစ်ပါသည်။

၂။ အဆိုပါစီမံကိန်းများ အကောင်အထည်ဖော်ဆောင်ရွက်ရန် The NIHC Consortium အနေဖြင့် စီမံကိန်းအကောင်အထည်ဖော်မည့် ဖက်စပ်ကုမ္ပဏီအဖြစ် PowerGen Kyaukse Co.,Ltd ကို (၂၇-၆-၂၀၁၈)တွင် ကုမ္ပဏီမှတ်ပုံတင်အမှတ် (၃၁၄အက်ဖ်စီ/၂၀၁၈-၂၀၁၉ (ရက)) ဖြင့် ဖွဲ့စည်းတည်ထောင်ထားပြီး ဖြစ်ပါသည်။

၃။ စီမံကိန်းအတွက် ဓါတ်အားဝယ်ယူရေးစာချုပ် (မူကြမ်း) Power Purchase Agreement Draft (PPA Draft) ကို နှစ်ဦးနှစ်ဖက်အကြိမ်ကြိမ် ဆွေးနွေးညှိနှိုင်း အတည်ပြုထားသည့် စာချုပ် (မူကြမ်း)ကို သက်ဆိုင်ရာဝန်ကြီးဌာနများသို့ သဘောထားမှတ်ချက်များ တောင်းခံထားပြီး ဖြစ်ပါသည်။

၄။ ဓါတ်အားပေးစက်ရုံစီမံကိန်းအား ၂၀၁၉ခုနှစ် ဖေဖော်ဝါရီလအထိ စီးပွားဖြစ်စတင် ဓါတ်အား ထုတ်လုပ်နိုင်ရေးအတွက်ဘက်ပေါင်းစုံမှ အားသွန်ခွန်စိုက် ကြိုတင်စီစဉ် ဆောင်ရွက်မှု လုပ်ငန်းများ ဆောင်ရွက်နေပြီဖြစ်ပါသည်။

၅။ ယခုစီမံကိန်း၏လျှပ်စစ်ဓါတ်အားပေးစက်များမှာ စက်အင်အားပမာဏကြီးမားပြီး ရင်းနှီး မြှုပ်နှံမှုများလည်း များပြားသည့်အတွက် ဌာနနှင့်ချုပ်ဆိုမည့် ဓါတ်အားဝယ်ယူရေးစာချုပ် (၅)နှစ်ကာလသက်တမ်းပြီးဆုံးပြီးနောက် ဌာနမှ ဆက်လက်ဓါတ်အားဝယ်ယူရန် ဆန္ဒရှိပါက လည်း အဆိုပါစက်ရုံမှ ဓါတ်အားထုတ်လုပ်ပေးသွားဖြစ်ကြောင်း (သို့မဟုတ်) ပြည်နယ် တိုင်းဒေသကြီးရှိ စက်မှုဇုန်/အထူးစီးပွားရေးစက်မှုဇုန်တို့တွင် လျှပ်စစ်လိုအပ်ချက်များ တစ်ဖက်တစ်လမ်းမှ ဖြည့်ဆည်းနိုင်ရေးအတွက် ဆက်လက်ရင်းနှီးမြှုပ်နှံ ဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။

၆။ သို့ဖြစ်ပါ၍ စီမံကိန်းပမာဏကြီးမားခြင်းနှင့် လိုအပ်သည့်ပစ္စည်းများ ပြည်ပမှ သာဝယ်ယူ တင်သွင်းရမည်ဖြစ်ပြီး၊ နိုင်ငံတော်၏လိုအပ်ချက်ဖြစ်သည့် လျှပ်စစ်ဓါတ်အား ထုတ်လုပ်ပေး သည့် စီမံကိန်းလုပ်ငန်းဖြစ်ပါသဖြင့် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုဥပဒေနှင့်အညီ ခွင့်ပြုမိန့် ရရှိရေး၊ အခွန်ဆိုင်ရာ သက်သာခွင့်များရရှိရေးအတွက်နှင့် ဓါတ်အားဝယ်ယူရေးစာချုပ်ကို လက်မှတ်ရေးထိုး ချုပ်ဆိုပြီး စီမံကိန်းလုပ်ငန်းဆောင်ရွက်သွားနိုင်ရေးအတွက် အဆိုပြုချက်ကို မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှုကော်မရှင်သို့ ဆက်လက်တင်ပြပေးနိုင်ပါရန်နှင့် လိုအပ်သည်များ လမ်းညွှန်မှု ပေးနိုင်ပါရန် တင်ပြအပ်ပါသည်။

လေးစားစွာဖြင့်

MAUNG KYAY
MANAGING DIRECTOR
NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD.

The NIHC Consortium (ကိုယ်စား)

မိတ္တူကိုင်-

- (၁) အင်ဂျင်နီယာချုပ်၊ အပူစွမ်းအင်သုံးစက်ရုံများဌာန၊ လျှပ်စစ်ဓါတ်အားထုတ်လုပ်ရေးလုပ်ငန်း။
- (၂) ရုံးလက်ခံ

တင်ဒါ/ စီမံကိန်းဆိုင်ရာ အချက်အလက်များ

Part V
Technical Data and Submittal

Technical Proposal for Rental Service

S.No.	Description	Bidder's Scope
1	Installed Capacity MW-(No. of Unit x MW/Unit)	147.768MW (8 units x18.471MW/Unit)
2	Guarantee Generating Output MW-(No. of Unit x MW/Unit) at site Condition	145.490 MW (8 Units x18.18625MW/Unit)
3	Generator Output Voltage (V)	11kV
4	Net Efficiency %)(Plant overall)	50% Load 41.34%based on HHV
		100%Load 41.34%based on HHV
	Net Guarantee Heat Rate (Btu/kWh) (Plant overall) (at any site condition based on Higher Heating value)	50% Load 8,253.80 Btu/kWh
		100% Load 8,253.80 Btu/kWh
	Fuel cost (US cents/kWh) = Net Guarantee Heat Rate (Btu/kWh) * gas price (USD/MMBtu) /10,000	50% Load 8.03 US cents/kWh
		100% Load 8.03 US cents/kWh
	Fuel Consumption based on High Heating Value	50% Load 14.3MMCFD
		100% Load 28.5 MMCFD
	kWh/mmBtu @High Heating Value (Plant overall) at any site condition	50% Load 121.2 kWh/mmBtu
		100% Load 121.2 kWh/mmBtu
5	Number of Total Running Unit	8
6	Number of Reserved Unit/Machine Model	0
7	Maker & Country of origin	W18V50SG engines manufactured by Wärtsilä Finland Oy in factory located in Trieste, Italy, European Union
8	Land requirement for power plant and new switchbay	24,000 m ²
9	Site LayoutPlan	Please refer the attached General Layout F0419T-Z-01
10	Construction Period (After issuing the Letter of Acceptance)	286 days after LOA
11	COD (After issuing the Letter of Acceptance)	286 days after LOA
12	Proposal for required new switchbay and transmission line facility	Please refer the attached Single Line Diagram F0419T-D01-01
13	Proposal for required new gas supply infrastructure	Please refer the attached Gas Supply Infrastructure Drawings and Map
14	Required gas pressure of power plant	Minimum 12.5bar gas regulating unit inlet
15	Transformer Voltage ratio, Capacity, Vector group, Maker and country of origin (for low voltage side)	2 x[70MVA, 145±2X2.5%/11Kv,Ynd11] 1x[50MVA, 45±2X2.5%/11kV Ynd11] Please see attached information sheet for Maker and Country of Origin.

S.No.	Description	Bidder's Scope
16	Transformer Voltage ratio, Capacity, Vector group, Maker and country of origin (for high voltage side)	2x[70MVA, 145±2X2.5%/11Kv,Ynd11] 1x[50MVA, 145±2X2.5%/11kv, Ynd11] Please see attached information sheet for Maker and Country of Origin.
17	Maker and country of origin for switchgear (for low voltage side)	Please see attached information sheet for Maker and Country of Origin.
18	Maker and country of origin for switchgear (for high voltage side)	Please see attached information sheet for Maker and Country of Origin.
19	Island mode	The Power Plant is capable of operating as an Inland mode.

Gas price shall be assumed as 9.7346 (USD/MMBtu) to calculate the fuel cost (USD/kWh).

The above data shall be based on the following conditions:

1. EPGE SYSTEM VOLTAGE 230 kV ±10 %. OR 132kV ±10 %.
2. POWER FACTOR 0.8 (LAGGING) UP TO (0.9 LEADING)
3. FREQUENCY 50 HZ
4. FREQUENCY VARIATION SETTING (51.5 - 52 Hz, 15 minutes) (51-51.5 Hz, 90 minutes)
(48.5 - 51 Hz, continuous)
(47.5 - 48.5 Hz, 25 minutes)
(47 - 47.5 Hz, 30 minutes)

Signature:



Authorized Person:Maung Kyay
Managing Director, National Infrastructure Holdings Company Limited
Anchor Member, NIHC Consortium

1 Compliance with Technical Particulars

The consortium confirms construction and operating of power plant shall comply with the laws, rules and guidelines stipulated by the Ministry of Resources and Environmental Conservation for environment.

The technical specifications of our proposed power plant are attached to this Part V – Technical Data and Submittals, with key highlights provided in the next sections.

In accordance with the SRFP, we hereby submit our qualifications in compliance with the requirements specified in clause 2 (b) Technical Particulars of the Invitation for Bid, to perform the project successfully as set out below:

S.No.	Requirement	Our Consideration	Compliance
1.	Description of the manufacturer / Country of origin for major equipment and accessories (with good and efficient condition);	Description of the manufacturer / Country of origin for major equipment and accessories (with good and efficient condition) is provided in this Part V – Technical Data and Submittals.	✓
2.	To state full technical specifications of major equipment and efficiency. The Net Guarantee Heat Rate based on Higher Heating value @ any site Condition, 100% Load Condition, 50% Load Condition of the power plant shall be clearly mentioned and EPGE will calculate the fuel cost (UScents/kWh) based on that Net Guarantee Heat rate by using the following formula "Fuel cost (UScents/kWh) = Net Guarantee Heat Rate (Btu/kWh) * gas price (USD/MMBtu)/10,000" (ANNEX C, EXHIBIT 5 of SRFP);	Full technical specifications of major equipment and efficiency are provided in this Part V – Technical Data and Submittals, as summarized in Sec. 0 Technical Data.	✓
3.	To state the capacity and quantity of the machine to be installed;	Capacity and quantity of the machine to be installed are 18.471 MW/set x 8 sets. Details are provided in this Part V – Technical Data and Submittals, as summarized in Sec. 0 Technical Data.	✓



S.No.	Requirement	Our Consideration	Compliance
4.	Designs and construction works for power plant shall be complied with international code and standard.	Designs and construction works for power plant comply with international code and standard. Please also refer to <i>Sec. 3 Codes and Standards</i> of this Part V – Technical Data and Submittals.	✓
5.	To submit the proposed layout plan for the power plant according to the international standards.	Proposed layout plan for the power plant is in accordance to the international standards. Please refer the attached General Layout F0419T-Z-01 attached to this Part V – Technical Data and Submittals, as well as the technical specifications attached to this Part V.	✓
6.	The power plant shall be connected to 132 kV bus at the Bellin Substation by installing a new 132 kV switchbay and the required protection equipment. All cost related to connection of 132 kV bus shall be borne by the successful bidder.	The Consortium confirms that the power plant shall be connected to 132 kV bus at the Bellin Substation by installing a new 132 kV switchbay and the required protection equipment. All cost related to connection of 132 kV bus shall be borne by the successful bidder. Please also refer to <i>Sec. 7 132kV Transmission</i> of this Part V – Technical Data and Submittals.	✓
7.	The unit generation shall be read by the energy meter (primary and back up) installed at the 132 kV outgoing feeder of the power plant. The cost for installation of energy meters shall be borne by the successful bidder.	The Consortium confirms that the unit generation shall be read by the energy meter (primary and back up) installed at the 132 kV outgoing feeder of the power plant. The cost for installation of energy meters shall be borne by the successful bidder.	✓
8.	The specification of energy meter shall be complied with the standard of EPGE and energy meter shall be calibrated in test lab of MOEE. The accuracy class of energy shall be $\pm 0.2\%$.	The Consortium confirms that the specification of energy meter shall be complied with the standard of EPGE and energy meter shall be calibrated in test lab of MOEE. The accuracy class of energy shall be $\pm 0.2\%$.	✓

S.No.	Requirement	Our Consideration	Compliance
9.	Protection relays (for machine and substation) shall comprehensively be included and the specification shall be complied with the standard of EPGE (To state in details of the specifications)	The Consortium confirms that protection relays (for machine and substation) shall comprehensively be included and the specification shall be complied with the standard of EPGE.	✓
10.	Black Start Facility shall be included for re-starting after system black out.	The Consortium confirms that Black Start Facility shall be included for re-starting after system black out.	✓
11.	The successful bidder shall arrange all required gas supply infrastructure for the power plant at its own cost. This Clause 2 (b) (11) as amended in Addendum No. 1.	The Consortium confirms that, should it be selected as the successful bidder, it shall arrange all required gas supply infrastructure for the power plant at its own cost. This Clause 2 (b) (11) as amended in Addendum No. 1.	✓
12.	The gas consumption of the power plant shall be read by the gas meter installed at the new gas supply infrastructure. Actual Heat Rate of Power Plant shall be calculated by using energy meter reading of energy meter located on the outgoing 132 kV feeder of power plant and gas meter reading of the gas meter located at the new gas supply infrastructure on monthly basis. The formula to calculate actual Heat Rate of Power Plant shall be the following; " Actual Heat Rate for a month (Btu/kWh) = Actual gas consumption recorded by the gas meter at the new gas supply infrastructure for a month (Btu) / Actual Electricity sent out recorded by the energy meter located at the outgoing 132 kV feeder of power plant for a month (kWh)"	The Consortium confirms compliance with this clause.	✓



S.No.	Requirement	Our Consideration	Compliance
13.	The successful bidder shall be penalized 150% of the cost of the additional gas consumed based on the rate paid by EPGE to the Myanmar Oil and Gas Enterprise if the actual Heat Rate exceeds the guarantee heat rate.	The Consortium confirms that, should it be selected as successful bidder, it shall be penalized as provided in this clause.	✓
14.	If the Actual Heat Rate of the power plant exceeds more than 5% of the Guarantee Heat Rate of the power plant for more than 3 aggregate months during the contract term, EPGE has the right to terminate the contract which will be entered between EPGE and successful bidder for purchasing of electricity on Rental basis in Kyaukse Region.	The Consortium confirms that if the Actual Heat Rate of the power plant exceeds more than 5% of the Guarantee Heat Rate of the power plant for more than 3 aggregate months during the contract term, EPGE has the right to terminate the contract which will be entered between EPGE and successful bidder for purchasing of electricity on Rental basis in Kyaukse Region.	✓
15.	COD of the power plant shall achieved after (4) hours continuous operation of the Net Guarantee output and the actual heat rate during this 4 hours continuous operation shall be less than or equal to the Net Guarantee Heat Rate. To determine the Actual Output and Actual Heat Rate of COD test of the power plant, energy meter reading of energy meter located on the outgoing 132 kV feeder of power plant and gas meter reading of gas meter located at the new gas supply infrastructure shall be used.	The Consortium confirms that COD of the power plant shall achieved after (4) hours continuous operation of the Net Guarantee output and the actual heat rate during this 4 hours continuous operation shall be less than or equal to the Net Guarantee Heat Rate. To determine the Actual Output and Actual Heat Rate of COD test of the power plant, energy meter reading of energy meter located on the outgoing 132 kV feeder of power plant and gas meter reading of gas meter located at the new gas supply infrastructure shall be used.	✓



2. Allowed Operating Ranges

On our analysis of Myanmar climatic conditions, we found out that the minimum temperatures can become as low as 18 °C in the months of December and January, and are generally below 25 °C throughout the year except in the month of May.

We considered this requirement and designed the machines to function at temperatures of as low as 15 °C. Our engines can operate in a temperature range of 15 °C to 40 °C and in a relative humidity of 100% at 15 °C.

The allowed operating ranges for the finalized Power Plant are:

Design ambient conditions	
Altitude above sea level	100 m
Ambient air temperature	35 °C
Relative humidity	60%
Maximum ambient conditions	
Maximum ambient air temperature	40 °C
Minimum ambient conditions	
Minimum ambient air temperature	15 °C
Relative humidity at minimum ambient temperature	100%

3. Codes and Standards

The consortium confirms construction and operating of power plant shall comply with the laws, rules and guidelines stipulated by the Ministry of Resources and Environmental Conservation for environment.

Details of relevant codes and standards, e.g.: The mechanical systems are designed, manufactured, constructed and installed according to the appropriate extent of the following standards:

International codes and standards

- ASME - American Society of Mechanical Engineering
- ASTM - American Society for Testing and Materials
- HEI - Heat Exchanger Institute
- NFPA - National Fire Protection Association
- IEC- International Electro technical Commission
- ISO- International Organization for Standardization
- API - American Petroleum Institute
- NFPA-National Fire Protection Association
- ASHARE - American Society of Heating Refrigeration and Air-Conditioning Engineers



Description	Code
Engine test run	ISO 15550
Vibration	ISO 8528 part 9
Design	EN 12100
Pipe design calculations	EN 13480 and DIN 2413
Welding	EN 1011
Stairs and platforms	ISO
Dimensional standards for installation materials (pipes, beams, etc.)	DIN, ISO, SFS and EN
Vertical tanks	API 650 or EN 14015
Horizontal tanks	EN 12285, excluding nozzle location
Pressure equipment	PED 97/23/EC
Typical material standard	DIN, SFS and EN

Abbreviation

DIN: German Standard (Deutsche Institute für Normung)

EN: European Standard

ISO: The International Organization for Standardisation

SFS: Finnish Standards Association

API: American Petroleum Institute

The electrical systems are designed, manufactured, constructed and installed to applicable parts according to the following standards:

Description	Code
Generator	IEC 60034
Transformer, oil-type	IEC 60076
Transformer, dry-type	IEC 60076
MV switchgear	IEC 62271-200 or IEC 62271
LV switchgear	IEC 61439-2
Enclosure protection	IEC 60529
WOIS workstation hardware	IEC 60950
WOIS workstation software	Applicable parts of VDE 3699
Earthing network	IEEE 80
Control panels	IEC 60439-1
PLC software	IEC 61131-3
Lighting installation	IEC 60598
Fire detection	EN 54
Protection against lightning	IEC 62305

Abbreviation

IEC: International Electrotechnical Commission

IEEE: Institute of Electrical and Electronics Engineers



EN: European Standard

VDE: The Association for Electrical, Electronic & Information Technologies

WOIS Wärtsilä Operator's Interface System]

I&C design codes and standards

The codes and standards for I&C systems will be as following:

International codes and standards

- ISO - International Standardization Organization
- IEC - International Electro-technical Commission
- IEEE - Institute of Electrical and Electronics Engineers

If they are equal to or above the above-mentioned international standards, the following Chinese standards will be adopted.

Chinese codes and standards

- DL/T 5182-2004 - Technical rule for designing of local equipment installation, pipeline and cables of I&C in power plant
- GB 50217-2007 - Code for design of cables of electric work
- DL/T 5175-2003 - Technical rule for designing thermodynamic control system of fossil fuel power plants
- DL/T 5227-2005 - Technical rule for thermal power automation design for auxiliary system (shop) of fossil power plant
- DL/T 641-2005 - Electric valve actuator, etc.

Codes and Standards - Civil

The engineering of all the civil works will be based on American codes and standards.

Reinforcing steel: ASTM A615, ASTM A706, etc. as per ACI-318

Cement: Portland cements as per ASTM C150, etc.

Structural steel: ASTM A36/A36M, ASTM A572/572 M (for hot rolled section, plates and bars), ASTM A500 (for tube), ASTM A53/53M Grade-B (for pipes) and ASTM A606 (for sheets) etc.

Connection bolts: ASTM A 307, ASTM A 325, ASTM A 490; nuts- ASTM A 194/194 M ASTM A 563; Washer-ASTM F 436/436M.

Anchor bolts are of ASTM A36/A36M, ASTM A449, ASTM A572/572 M, and ASTM F1554 M (for anchor rod).



4. Generating Set



The W18V50 SG engine and generator are mounted on base frames. The base frames are flexibly mounted on a concrete foundation by means of steel springs.

The main dimensions of the W18V50SG generating set are:

Length	18.781 m
Width	4.09 m
Height	6.02 m
Weight (dry)	364870 kg
Weight (wet)	379870 kg

The main technical data are:

Configurations	V
Cylinder	18
Cylinder bore	500 mm
Piston stroke	580 mm
Speed	500 rpm (50 Hz)
Mean effective pressure	22kPa
Mean piston speed	9.67 m/s (50 Hz)
Compression ratio	11.5:1
Number of inlet valves	2
Number of outlet valves	2
Direction of rotation facing towards flywheel	Clockwise

Manufacturer : Wärtsilä

Country of origin: Finland, Italy, European Union

5. Control System

CONTROL SYSTEM



Control and Supervision Concept for Wärtsilä Energy Solutions

The Wärtsilä automation system is designed for safe, reliable, efficient and easy operation of the generating sets, their associated auxiliaries and electrical systems. The modular design of the control system allows the system to be used for optimal power generation for installations ranging from large multi-generating set power plants to one-generating-set installations.

The automation system enables centralised operation of the plant from the control room.

The WOIS (Wärtsilä Operator's Interface System) is an object-oriented, easy-to-use process display and fault-diagnostic workstation located in the control room. As a backup, the plant can also be operated from the control panels located in the same control room.

Wärtsilä may collect information and data relating to the technical operating parameters of any equipment delivered, including without limitation information that Wärtsilä may gather from sensors, instruments, monitors, or other industrial control or SCADA devices on the equipment delivered ("equipment data"), and Wärtsilä may use this equipment data for product and solution development or other purposes.

Control mode options in automatic operation

The following control modes are available for generating set control:

By increasing or decreasing the engine fuel supply, the active power can be controlled in:

- MW mode - generating set power is maintained at a pre-set value irrespective of the system load or the frequency. This is the typical operating mode for a base-load power plant supplying an infinite grid.
- Isochronous load sharing – the generating set shares the load with other generating sets at a constant frequency. This is the typical operating mode when running in isolation from the grid.
- Speed droop mode – the generating set shares the load with the grid, or with the other generating sets according to a speed droop curve. This is the typical operating mode for smaller grids, or island operation.

By increasing or decreasing the generator voltage, the reactive power can be controlled in:

- Constant Power Factor control – the generating set's power factor is maintained at a pre-set value, and any changes are produced by the grid or the other generating sets. This is the typical operating mode for a base-load power plant supplying an infinite grid.



-
- Voltage droop compensation control - The generating set will share the reactive load with the other generating sets (if present) based on digital communication lines between the AVR's when running in island mode. This is the typical operating mode when running in isolation from the grid. Voltage droop mode – the generating set will share the reactive load with the grid and other generating sets equally in relation to the size of the units. This is the typical operating mode for smaller grids or island operation.

The system will automatically switch the operating mode based on the “parallel with grid” signal. In Auto mode, the setting values for active and reactive power will be according to operator input in the WOIS workstation, while in Manual mode they are determined by the switches in the control panel.

Operator station

WOIS workstation

The power plant is controlled and supervised from the WOIS workstation (Wärtsilä Operator's Interface System). All actions necessary for normal operation, such as start and stop of the generating sets, load increase and load reduction are activated and supervised via the WOIS workstation, using a mouse, keyboard and display. The operator can also observe key data from the plant such as various temperatures and pressures as well as measurements of electrical variables such as generator power, voltage and frequency. The WOIS workstation also includes a hard-copy laser printer.

Each WOIS workstation includes the following functionality:

- Using various dynamic objects, such as images of pumps, valves and other components and units. The statuses of these objects are displayed graphically. By interacting with an object, the function and operational status can be displayed.
- Process trends can be displayed as a free combination of six measured values such as pressures, temperatures, speed, generating set load, etc. The operator may combine the values of interest in one graph to get a good view of the total process for further analysis. The trends are stored for up to 180 days, and the operator may call back a trend for any time interval within these limits.
- An alarm banner in the uppermost part of the displays information about the most recent alarm. The active alarm list informs the operator of possible problems in the process. An alarm will remain on the active alarm list until the process has returned to normal state and the alarm has been acknowledged. Historical alarm and event lists can be called up for further evaluation of events.
- Any of the displays and the alarm list can be printed to the hard-copy printer.

The WOIS workstation includes the following equipment:



Desktop PC computer with sufficient processing and memory capacity
Display, 24" TFT flat screen
Keyboard and optical mouse
Operating system
Human-Machine-Interface (HMI)
software

WISE workstation

The WISE workstation (Wärtsilä Information System Environment) handles the long term data storage and reporting functions of the power plant. The operator can view and print out the daily, monthly and yearly reports produced by the reporting program. The WISE workstation keeps engine and production reports available for later study and archiving. The WOIS workstation (Wärtsilä Operator's Interface System) provides information to the WISE workstation.

The WISE workstation includes the following functionality:

- Daily engine and plant reports of plant analogue measurement values. Daily minimum, maximum and average values are generated and stored for one year.
- Long-term engine and plant performance tracking through trend displays of the reported analogue measurements.
- Daily production reports of generated active and reactive energy as well as hourly fuel consumption are generated and stored for one year.
- Monthly production reports (on a daily level) are stored for 5 years and yearly production reports are generated and stored for 10 years.
- The production reports include minimum, maximum, average and total sum calculations for the period.
- Electronic log book with search possibilities for recording operation and maintenance activities.

The WISE workstation includes the following equipment:

Desktop PC computer with sufficient processing and memory capacity
Display, 24" TFT flat screen
Keyboard and optical mouse
Operating system software
Reporting interface software
Laser printer for hard-copy and report
printing



Uninterrupted power supply

Uninterrupted power supply is used for control room operator stations.

Control panels

Common control panel

The common control panel (CFA901) contains the mimic diagram for the plant's Medium-Voltage system, and operating switches, buttons and meters for synchronising. It also contains the common PLC system.

The control panel (CFA901), contains the following equipment:

Programmable Logic Controller (PLC) unit for plant control and supervision of the common systems of the plant. The high-grade PLC integrates the control functions as required by the process and operation sequences.

The PLC includes the following units and devices:

- Power supply for CPU (110 VDC)
- Central Processing Unit (CPU)
- Communication card
- Digital input and output cards
- Analogue input cards

Double frequency meter (for synchronising)

Double voltage meter (for synchronising)

Synchroscope (for synchronising)

Manual synchronisation control interface unit with:

- Synchronising mode selector switch (auto/manual)
- Generating set voltage adjustment switch
- Generating set frequency adjustment switch
- Synchronising breaker close control pushbutton
- Safety relay reset pushbutton
- Indication lamp test pushbutton

Auto-synchroniser relay

Check synchroniser relay

Safety relay for emergency circuit

Mimic diagram for the electrical system

Emergency stop pushbutton



Generating set control panel

The generating set control panel (CFC 0_1) contains selectors for the generating set operating mode, meters, manual control interface for manual control, the Power Monitoring Unit, the protection relays and the hardwired engine-shutdown and breaker-trip circuits. In auto-mode, the PLC system together with the automation system performs the starting and stopping sequences automatically and sets the active load and the power factor references for the primary controls according to the set points entered into the WOIS workstation. The automation system and the PLC supervise the status of the generating set constantly, regardless of the running mode.

The generating set control panel (CFC0_1), includes the following equipment:

Programmable Logic Controller (PLC) unit for control and supervision of the generating set. The high-grade PLC integrates the control functions as required by the process and operation sequences. The PLC also handles the start/stop sequence, process measurements and alarms.

- Central Processing Unit (CPU)
- Communication card
- Analogue measurement Input - Output cards (project-specific)
- Digital Input - Output cards (project-specific)

Set of conventional panel-mounted meters for:

- Current meters, one per phase
- Voltage meter
- Power factor meter
- Active power (MW) meter

Generating set emergency stop push-button

Power monitoring unit (PMU)

The PMU is a digital power monitoring unit where the generating set's electrical measurements can be monitored and supervised.

The PMU includes the following functions:

- Measurement of phase currents, with stored minimum and maximum
- Measurement of main and phase voltages, with stored minimum, maximum and average
- Measurement of frequency
- Calculation of Active, Reactive and Apparent power
- Calculation of Active and Reactive energy, imported, exported and total
- Calculation of harmonic distortion
- Calculation of Power Factor



-
- Measurement of engine running hours

Generator protection relay

The protection relay has the following protection functions:

- Over- and under-voltage protection
- Over- and under-frequency protection
- Reverse power protection

- Over-current and short-circuit protection
- Earth fault protection
- Loss of excitation protection

- Negative sequence (unbalance) over-current protection
- Directional earth fault protection
- Voltage restrained over current protection
- Thermal overload protection

- Residual voltage protection

Generator differential protection relay

The digital programmable differential protection relay is connected to current transformers in the generator cubicle and in the generator's main terminal box.

Manual control interface with:

- Generating set control mode selector switch (Auto-Manual)
- Active power control mode selector switch (Speed droop-kW control)
- Reactive power control mode selector switch (Voltage droop – power factor control)

- Engine power control switch (decrease-increase)
- Generator voltage control switch (decrease-increase)
- Synchronising select and start of synchronisation control switch
- Engine start pushbutton with engine running indication light

- Engine stop pushbutton with engine stopped indication light
- Breaker close pushbutton with breaker closed indication light
- Breaker open pushbutton with breaker opened indication light

- Engine shutdown indication light with reset pushbutton
- Breaker trip indication light with reset pushbutton



- Indication lamp testing pushbutton

Safety relay for emergency circuit

Auxiliary module panel (mounted on the Engine auxiliary module)

The engine auxiliary panel includes breakers and controls for the electric motors and the generating set's heaters as indicated below. It is also equipped with indicator lamps and alarms. The panel controls the following motors and heaters (if applicable):

- Generator anti-condensation heaters
- Pre-lubricating oil pump
- Fuel booster pump
- Turning gear motor
- Preheating circulating pump
- High-temperature cooling circuit preheaters
- Air filters (if motorised)
- 16A Outlet socket

MEDIUM VOLTAGE SYSTEM

Neutral point cubicle

The neutral point cubicle includes the following main equipment:

Neutral grounding resistor 5 A, 10 s

Single pole disconnectable link

Current transformers (single phase) for earth fault

LOW VOLTAGE SYSTEM

The low-voltage system distributes low-voltage electricity to electrical consumers included in Wärtsilä's scope of supply.

The low-voltage system includes the following equipment:

Low voltage switchgear

The low-voltage switchboard is a steel-sheet-enclosed, cubicle-type switchboard that feeds motor control centres, motors and other apparatus of the power plant delivered by Wärtsilä.

The switchboard includes the following main equipment:



Incoming feeder(s)
with
Main switch
Voltage meter with selector switch
Ammeters
Fused outgoing feeders for local control panels

Motor starters direct on line for supplied
electric motors External protection class:
IP3x

Automation level and CCR layout

a) Control mode & automation level

(a) Internal Combustion Engines will be controlled by OEM local control panel supplied by engine vendor. And data will be linked with DCS, only for monitoring.

(b) BOP systems will be monitored and controlled by DCS in Central Control Room.

(c) The following table lists main I&C control system for this project:

SN. No	System/ equipment	Type of control system	Control location	Interface with DCS
1	Internal Combustion Engines	internal combustion engines control panel	LCP&CCR	Communication
2	D.M. water system	DCS	CCR	Hardwired
3	Waste water treatment system	DCS	CCR	Hardwired
4	Chemical dosing system	DCS	CCR	Hardwired
5	Fuel Gas system	DCS	CCR	Hardwired
6	Lubricating oil system	DCS	CCR	Hardwired
7	Air Compress System	DCS	CCR	Hardwired
8	CEMS	PLC	LCR	Hardwired

b) CCR Layout

There will be one Central Control Room (CCR). DCS operator stations, fire alarm panel and printers will be laid in CCR. Operator stations of DCS. DCS cabinets and power cabinets etc. will be laid in Electronic Equipment Room (EER).

For BOP systems, D.M. water system, waste water treatment system and fuel gas system etc. will be controlled by DCS directly. Relevant local electronic equipment rooms will be located in respective BOP building.

c) The configuration of plant control system

The main parts of instrument and control system will be provided for this project as follows:

(a) Distributed control system (DCS), the main function of DCS includes data acquisition system (DAS), modulating control system (MCS), sequence control system (SCS) and electrical equipment control system.

(b) The control systems of internal combustion engines (will be supplied by Internal combustion engines vendor) will have interface with DCS.

(c) Stack CEMS.

(d) Fire protection and detection system.

(e) Other control system.

Preliminary configuration, please refer to drawing F0418T-K-01

Distributed Control System (DCS)

A microprocessor based distributed control system (DCS) will be supplied. The DCS will accommodate the major modulating and sequence controls of the unit to a high degree of automation. The CCR control console will enable the facility centralized and automatic operation with minimal staffing level.

The DCS will consist of distributed processing units, the data communication system and the man-machine interface etc.

The DCS will be designed to achieve high levels of reliability by appropriate redundancy and self-diagnosis function.

The main function of DCS includes: data acquisition system (DAS), modulating control system (MCS), sequence control system (SCS), and electrical equipment control system.

Data acquisition system (DAS)

DAS will be the main monitoring method for unit operations (including all normal, emergency, start-up, shut-down operations). Through Man-Machine Interface (MMI) such as TFT and printer etc., DAS will provide various processes I/O, operation information and abnormality alarm to the operator to meet control requirements, and will provide a reliable and flexible interface between operator and machine based on TFTs of DCS. The main functions as follows:

- Acquires all kinds of process variables. Process variable includes primary parameter, second parameter (calculated value) and condition of equipments.
- Input signal treatment: correctness differentiates of input signal, digital filter, nonlinearity adjustment, cold junction compensation and open circuit check, engineering unit transform, validity check of digital value junction and pulse signal input accumulation etc.
- Alarm limit value check and over limit alarm: fixed limit value check and over limit alarm, variable limit value alarm, limit value alarm, multilevel alarm, grouping alarm and alarm cut out etc.
- Digital value change state treatment: running status change record, operating record, and running time accumulation of important auxiliary machines.
- Events post trip logging: automatically print out some important parameters in a period of time before and after trip.
- Secondary parameter calculates: compose analog value, compose digital value and calculate average value etc.
- Tabling and logging: periodic logging (shift sheet, daily sheet etc), automatic logging (including: alarm logging, digital value change state logging), request logging (including: group parameter logging, post trip logging, trend logging, historical data logging, alarm schedules and other schedules logging etc), TFT display logging etc.
- TFT display: display various pictures (including simulated drawings, bar drawings, graph, group display drawings, control system drawings and various schedules etc.), pop-up picture, edit picture etc.
- Operation guide: awaking and guide for startup/shut down units, best operation, preventing



and deal with accident etc.

- Trend display: including real trend and historical trend, and its parameters can be set by operators.
- Historical data storage and retrieval: including basic function of display, reports forms log, historical data storage and retrieval etc.

Modulating control system (MCS)

Modulating control system or called Closed Loop Control System (CLCS) will be one of the most important control systems.

The detailed closed loop of modulating control system will be submitted during engineering stage.

Sequence control system (SCS)

SCS or called Open Loop Control System (OLCS) will be digital control system. It will be one of the important control systems of unit.

SCS will be composed of some different function groups which are defined according to process system. Each function group will achieve specified start-up/shutdown function. There are three classes (viz. function class, sub-function class and driver class) in SCS. Sub-function class and function class will be the main control mode of this project. Process can be controlled by auto, manual or sequence modes.

Other control systems

Internal combustion engines control system

The internal combustion engines local control panel will be supplied by internal combustion engines vendor. The control mode will be as per vender's standard. Local control panel for each internal combustion engines will be laid in local for control. The internal combustion engines control panel will have data link interface with DCS for monitoring.

Continuous Emission Monitoring System (CEMS)

The continuous emission monitoring system will mainly be intended for analysis of flue gas to stack. CEMS will be sample extraction type, and will measure the concentration of:

- Flue gas temperature
- Flue gas pressure
- Flue gas flow
- Flue gas CO
- Flue gas NO_x
- Flue gas SO₂
- Particle concentration

There are total one CMES control system and two sets of analyzers for monitoring all the above parameters for all the stacks.

Main I&C equipment

Distributed control system (DCS)

General

The DCS system will provide these functions for unit and it's associated auxiliaries, such as comprehensive process monitoring and control, displays, alarming, calculations, data logging, data display, data storage and retrieval, and so on. Processor, communication network, communication module and power supply of DCS will be configured dual-redundantly.

MMI & peripherals

The MMI and peripherals of DCS will be provided as follows:



-
- Operator stations – 2 Nos. (with 22" TFT, mouse and key board)
 - Engineering station – 1No. (with 22" TFT, mouse, key board)
 - Laser printers – 4 Nos.
 - WOIS – 3 Nos.(Supplied by vendor)
 - WISE – 1 No.(Supplied by vendor)

Redundancy

In order to establish a high degree of DCS reliability, following system components will be provided in redundancy.

- Dual redundant power supplies
- Dual redundant processors
- Dual redundant communication buses

Remote I/O

Remote I/O will be a part of DCS. Remote I/O will be adopted for monitor signals that are far from electrical equipment room etc. The local remote I/O cabinets can meet the requirement of the temperature, humidity and dustproof etc. The air condition will be considered for local electrical equipment rooms.

Communication interface

Perfect and reliable standard communications interfaces will be provided for connecting DCS with other control systems, such as internal combustion engines control systems, etc.

Local devices and instruments

The local devices and instruments will be adopted to meet the control function requirement for unit startup, continuous running and safe shutdown.

Transmitters, switches, thermocouples, RTDs, etc. transmitting instruments utilized to measure the plant process parameters will be provided to support control, monitoring, alarm and protection, and will hardwire to control systems etc. control systems. Local indicators, such as pressure gauges, thermometers, level gauges etc. are also provided for maintenance and local monitoring. All impulse lines, fittings, valves and welded parts of instrument will be compatible with the process demand.

I&C Cable and cable tray

The control and instrument cable will choose flame retardant type. Cables for binary input signals will be overall shielded and cables for analog signals will be individual pair shielded. High-temperature-resistant cable will be adopted in high temperature zone.

The instrument cables will be installed in galvanized steel cable trays or conduit. Galvanized covers will be installed on cable tray in such place where protection from accumulation of dust or debris or sparkle is required.

6. Proposed Layout

As provided by EPGE, the land area of about 50,750 square meters, is located at the Bellin 230 kV substation.

The proposed site layout is shown in the drawing attached.



7. 132 kV Transmission

The plant will be connected to Bellin 230 kV substation by installing a new 132 kV switchbay with required protection equipment.

The Single Line Diagram is attached.

The supplier and Country of Origin

SYSTEM	EQUIPMENT	SUPPLIER NAME	COUNTRY
Electrical system	Generator transformers	Shandong Power Equipment Co., Ltd. Xian XD Transformer Co., Ltd. Shandong Taikai Transformer Co., Ltd. Shandong Luneng Mount.Tai Electric Equipment Co.,Ltd.	China China China China
	MV switchgears	Tianshui Changcheng Switchgear Factory Co.,Ltd. Jiangsu Daqo Changjiang Electric Co., Ltd. Shandong Taikai Vacuum Switch Co., Ltd. XD Baoji Electric Co., Ltd. Ningbo Tianan Smart Grid Technology Co., Ltd.	China China China China China
	LV PCC &MCC Switchgears	Tianshui Changcheng Switchgear Factory Co.,Ltd. Jiangsu Daqo Changjiang Electric Co., Ltd. Shandong Taikai Vacuum Switch Co., Ltd. XD Baoji Electric Co., Ltd. Ningbo Tianan Smart Grid Technology Co., Ltd.	China China China China China
	Black start diesel generators	Cummins Mitsubishi Perkins SWT AGG	China China China China China
	132kv AIS Switchgears	XD Sieyuan Taikai Pinggao Jinguan	China China China China China
Instrumentation	DCS	Emerson(OVATION)	China

and Control		FOXBORO(EVO) GE(Nexus) Siemens(T3000) Hollysys(MACS)	China China China China
	CEMS	Qingdao Yijiehongli Technology Co., Ltd.(Siemens or Emerson gas analyzer integrated contractor) Mandrake Environmental Technologies (Beijing) Co., Ltd.(CODEL gas analyzer integrated contractor) Chongqing Chuanyi Analyzer Co., Ltd.(ABB gas analyzer integrated contractor)	China China China

8. Gas Supply Infrastructure

Gas supply Infrastructure will be implemented as instructed vide addendum 1 issued by WPGE on 8th February 2018. The preliminary survey was accomplished and engineered.

Material List for 4.85 Miles of a new 10 inches Gas Pipe Line Installation from SEAGP off take to the site for the power plant [EPGE G 02/2017 - 2018 [135] MW Rental Power Plant

No	Description	Qty	Unit	Brand Name	Country of Origin
1	10" Steel Line Pipe (Sour Service Steel)	7805	mtr	Shandong Kerui Petroleum	China
	ERW, API 5L, PSL 2, 10" (273.0 mm * 11.13 mm), Sch 80, X 42			Equipment Co.,Ltd.	
	BE, 3 LPE Coated (3.5 mm), DIN 30670, DRL (11.6m ~ 11.8m)				
2	10" Ball Valve 600#	3	set	KVC/Fukuyama	UK/Japan
	Body A105				
	Stem F4A+ENP				
	Ball A105+ENP				
	End RF				
	Type Trunnion				
	Operation Worm gear				
3	Including 2nons of flanges, 2nons of Gaskets and Stud Bolts& Nuts				
	Heat Shrinkable Sleeve	25	Rolls	Covalence	USA

4	Closure Patches	700	Nos	Raychem	USA
5	E 6011 electrode 3.2 mm	0.118	Tons	Lincoln	Indonesia
6	E 6011 electrode 4.0 mm	0.354	Tons	Lincoln	Indonesia
7	Pipe Fittings	1	lot	Shandong Kerui Petroleum Equipment Co.,Ltd.	China
	10" Schl 80 Tee				
	10" Schl 80 Elbow 45 Deg				
	10" Schl 80 Elbow 90 Deg				
	14" x 10" Schl 80 Reducer				

Following standards will be complied.

10" Steel line pipes Reference Standards

1. API 5L Specifications for Line Pipe (Latest Edition)
2. International Standard ISO 3183, 2nd Edition, Steel Pipe for Pipeline Transportation Systems
3. NACE TM 0284 : 2011
4. Hardness Testing on Parent metal, HAZ and weld Zone ASTM E 92
5. Tensile Testing ASTM A370
6. PSL 2 pipe ordered for Sour Service, Annex H of ISO 3183 (API 5L)

Heat Shrinkable Sleeve

Specification: Covalence WPC 100M

1. Maximum operation temperature -80 deg.C
2. Min preheat temperature -90-100 deg.C
3. Peel to steel (AST D- 1000 Std) - 42lb/in@ 23 deg.C
4. Impact Resistance (ASTM G 14) ≥ 95 in-lb
5. Penetration Resistance (ASTM G 14) -No holiday @10kV @65 deg. C
6. Product Thickness ≥ 3mm (1.4-1.6)

Closure Patches : Covalence WPCP

Welding Electrode

Electrodes conforming to AWS Class E-6011

Coating	High Cellulose Electrode
Welding Current/Position	DCEP, DCEN, ALL POSITION
Tensile Strength	62000 to 70000 psi
Yield Strength	48000 to 64000 psi
Elongation	22 ~ 30 %
Charpy V-Notch Toughness	20 -53 ft-lb at -30 deg.C
Container Type	15 Kg easy open can (Airtight sealed metal container)

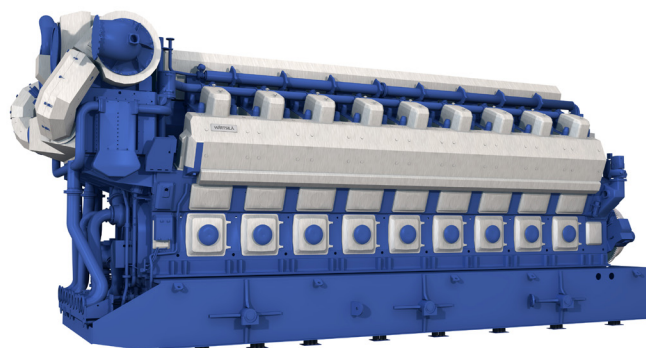
Wärtsilä 50SG

Engine generating set

PRODUCT LEAFLET

TECHNICAL DATA

Cylinder configurations	18V
Cylinder bore	500 mm
Piston stroke	580 mm
Speed	500 rpm (50 Hz) 514 rpm (60 Hz)
Brake mean effective pressure	22 bar
Mean piston speed	9.7 m/s (50 Hz) 10 m/s (60 Hz)



RATED ELECTRICAL POWER (kW)

Generating set type	50 Hz	60 Hz
18V50SG	18440	18880
18V50SG with turbogenerator	18690	19130

GENERAL CONDITIONS

Rated electrical power is given at generator terminals and ISO 3046 conditions.

All Wärtsilä engines, in a standard configuration, have engine-driven lubricating oil, low- and high-temperature circuit cooling water pumps. Gas LHV >28 MJ/Nm³. Gas methane number >80. Gas pressure >5.1 bar(g) at plant inlet.

Please contact Wärtsilä for project-specific performance figures in case the gas does not fulfil the aforementioned criteria.

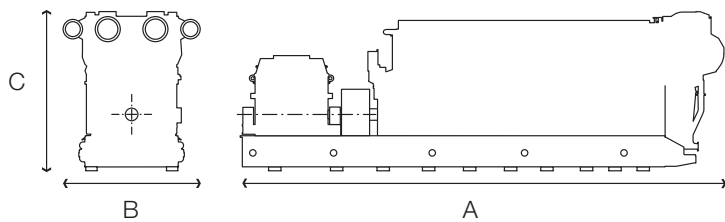
SPECIAL CONDITIONS

Site conditions and applicable emission limits may have an impact on the heat rate and efficiency. Please contact Wärtsilä for project-specific performance figures.

DIMENSIONS (MM) AND WEIGHTS (TONNES)

Generating set ¹ type	Length (A)	Width (B)	Height (C)	Dry weight ² +/- 5%	Reduced transportation weight ³ +/- 5%
18V50SG	18781	4090	6020	365	210

V-CONFIGURATION



- ¹ The listed dimensions of generating set are maximum transportation dimensions, excluding the spring-mounted shock absorbers and turbocharger inlet cones for V engines.
- ² Generating set dry weight includes spring-mounted shock absorbers and inlet cones, excludes lube oil and cooling fluids.
- ³ In case of limitations in maximum allowed transport weight, the generating set can be further disassembled for separate shipment of engine, generator and common baseframe. The listed reduced transportation weight is the weight of the heaviest of these parts. Please contact Wärtsilä in case transport weight needs to be further reduced.

DISCLAIMER

The information contained in this leaflet is provided for informational purposes only and may not be incorporated, in whole or in part, into any agreement or proposal. No representation of any kind is made in respect of any information contained herein and Wärtsilä expressly disclaims any responsibility for, and does not guarantee, the correctness or the completeness of the information. The calculations and assumptions included in the information do not necessarily take into account all the factors that could be relevant in a particular case. Information in this leaflet shall not be construed as a guarantee or warranty of the performance of any Wärtsilä technology, equipment or installation.

0 GENERAL**0.1 EXECUTIVE SUMMARY****General**

This technical specification provides the reader with the basic technical data required for an evaluation of the plant's technical features.

The proposed Modular power plant is designed and engineered in accordance with this technical specification.

The technical data stated in this document is for guidance and evaluation purposes only. Performance data and related reference conditions are separately stated in the supply contract documents.

The governing law and the procedures of dispute resolution for this technical specification, shall be as stipulated in the Agreement supply contract. If there is any discrepancy between the English version and a translated version of this technical specification, the English version shall prevail and have precedence over the translation.

Design and construction

The essence of the design is simplicity, safety and reliability.

The equipment is designed to prevent accidental contact with moving, hot or tensional parts and to minimise ingress of dust and dirt.

The structure and layout design of the power plant permits access to all parts for inspection, maintenance and repair.

Wärtsilä quality procedures and test & inspection procedures are applied to ensure product quality throughout the design and manufacturing process. Special attention is paid to the engine and auxiliary unit testing, as well as inspection and testing of the final installation.

Wärtsilä's quality and environmental management systems fulfil, and are certified according to, ISO 9001:2000 and ISO 14001:2004.

Main parts and devices like panels, valves, pumps, etc. are marked with engraved name plates indicating their item codes used in Wärtsilä documentation and manuals.

English is used in all documents, correspondence and nameplates.

SI units of measurement are used in all technical documents.

The design and manufacture of power plant equipment supplied by Wärtsilä is subject to constant review, and due to improvements and optimisation of materials, design and tooling techniques, manufactured equipment may be improved from the specification given below.

Deviations to assumptions made in this specification

If the purchaser's requirements, local building codes, zoning requirements, Grid/Interconnection Study, Environmental Impact Assessment, Building Permit Application, Soil investigation, Topographical survey, Contamination evaluation or site Demolition requirements or other conditions deviate from the assumptions made herein and have an impact on Wärtsilä's scope of supply, the scope of work shall be reviewed, and the price adjusted accordingly.

Project Management and Engineering

The delivery of the Modular power plant will be managed by a dedicated project team, comprised of a project manager who has the overall responsibility for the delivery. The project manager is assisted by project engineers for the main technical disciplines.

The project team is the single point of contact with the purchaser's organisation, and has full authority to decide technical and commercial issues related to the project on behalf of Wärtsilä.

0.2 TYPE OF PRODUCT

The proposed Modular power plant is designed for base load operation and is intended for power generation.

The system is designed for parallel operation with the public supply system.

The Modular power plant is designed to use Natural gas as the main fuel.

0.3 MAIN DATA AND CONDITIONS**Configuration**

The Modular power plant is equipped with 9 engines of the W18V50SG engine type as the prime mover.

Main data and conditions gives the allowed operating range for the finalised Power Plant.

Design ambient temperature

Altitude above sea level	100	m
Ambient air temperature	35	°C

Maximum ambient temperature

Maximum ambient air temperature	40	°C
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Minimum ambient temperature

Minimum ambient air temperature	15	°C
Relative humidity at minimum ambient temperature	100	%

0.4 OPERATION MEDIA

General

To maintain the components and equipment of the Modular power plant in good operating condition, and to minimise wear and tear, it is of utmost importance that all operating media used are of good quality and within the specifications given by Wärtsilä.

Below are the main parameters for the major operating media of the Modular power plant. The complete specification and requirements for all the operating media needed are given in the Operation and Maintenance Manuals delivered for the Modular power plant.

Fuels

Wärtsilä engines are designed and developed for continuous operation on fuels with a quality within the recommended limits below. These values indicate the limits for the power plant and the individual limits for the engines. Fuels having one or several values close to this limit might have a negative impact on the performance and component lifetime.

Gas fuel

Parameter		Limit	Unit
Lower heating value (LHV) ¹ for system design	Minimum	38.0	MJ/m ³ N
Methane number ² , engine performance related	Minimum	80.0	
Lower heating value (LHV) ³ , engine performance related	Minimum	30.0	
Methane contents, CH ₄	Minimum	70	vol -%
Hydrogen sulphide, H ₂ S	Maximum	0.05	vol -%
Total sulphur ⁴	Maximum	5	mg/kg
Hydrogen, H ₂	Maximum	3	vol -%
Carbon dioxide	Maximum	20	vol-%
Water and hydrocarbon condensates before the engine		Not Allowed	
Ammonia	Maximum	25	mg/m ³ N
Chlorine + Fluorines	Maximum	50	mg/m ³ N
Particles or solids, content	Maximum	50	mg/m ³ N
Particles or solids size	Maximum	5	µm
Gas inlet temperature	Minimum/ Maximum	0 ⁵ / 50	°C

¹ Values given in m³N are at 0 °C and 101.3 kPa

² Methane number (MN) calculated according to EN 16726.
Minimum value depends on the receiver temperature.

³ Values given in m³N are at 0 °C and 101.3 kPa

⁴ Applies when CO catalyst is used

⁵ Minimum of 15°C above gas fuel dew point

Gas pressure to gas regulating unit	Minimum	4.9 ⁶	bar (g)
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Engine cooling water

Corrosion inhibiting additives must be used in the engine cooling water. Only additives of the brand and types approved by Wärtsilä are allowed to be used. The additive manufacturer's dosage, pH, and testing recommendations shall be followed.

If a nitrite-based corrosion inhibitor is used, the aim should be to keep a nitrite (NO₂) content of approximately 1500 mg/l, calculated as nitrite. The pH shall be between 8.5 and 9.5.

The limits for engine cooling (primary circuit), turbine washing, and separator operating water must meet the following requirements:

pH at 25°C	>6.5	-
Conductivity at 25°C (limit for turbine washing only)	<100	mS/m
Total hardness Ca ²⁺ + Mg ²⁺	<10	°dH
Silica as SiO ₂	<50	mg/l
Chlorides Cl ⁻	<80	mg/l
Sulphates as SO ₄ ²⁻	<150	mg/l

The general appearance should be clear, colourless, and free of undissolved materials.

Charge air

The highest allowed concentration of impurities at the charge air inlet is:

Chlorides (Cl ⁻)	1.5	mg/Nm ³ ⁷
	1.16	mass-ppm
Hydrogen Sulphide (H ₂ S)	375	µg/Nm ³
	0.25	vol.-ppm
Sulphur Dioxide (SO ₂)	1.25	mg/Nm ³
	0.43	vol.-ppm
Ammonia (NH ₃)	94	mg/Nm ³
	0.125	vol.-ppm
Minimum filtration class	F5	EN 779:2002

⁶ Dependent on the lower heating value (LHV) of the gas. Minimum pressure given at LHV minimum 36 MJ/m³_N, if LHV is lower, minimum required pressure will increase.

⁷ Nm³ given at 0 °C and 1013 mbar

Lubricating oil

Only lubricants that are approved by Wärtsilä are allowed to be used. The major lubricating oil suppliers have certain lubricating oils which are approved by Wärtsilä.

The properties of the fresh lubricating oil must meet the following requirements:

Viscosity class		SAE 40	
Viscosity Index (VI)	Minimum	95	
Sulphated Ash Level	Maximum	0.6	% mass
Alkalinity (BN)		4 - 7	mg KOH/g



0.6 CODES AND STANDARDS

The design complies with the following standards:

Mechanical systems

The mechanical systems are designed, manufactured, constructed and installed according to the appropriate extent of the following standards:

Description	Code
- Engine test run	ISO 15550 except for the fuel consumption calculation, which is based on Wärtsilä's experience of this engine type.
- Vibration	ISO 8528 part 9
- Design	EN 12100
- Pipe design calculations	EN 13480 and DIN 2413
- Welding	EN 1011
- Stairs and platforms	ISO
- Dimensional standards for installation materials (pipes, beams, etc.)	DIN, ISO, SFS and EN
- Vertical tanks	API 650 or EN 14015
- Horizontal tanks	EN 12285, excluding nozzle location
- Typical material standards	DIN, SFS and EN

Abbreviations

DIN:	German Standard (Deutsche Institute für Normung)
EN:	European Standard
ISO:	The International Organization for Standardisation
SFS:	Finnish Standards Association
API:	American Petroleum Institute

Electrical systems

The electrical systems are designed, manufactured, constructed and installed to applicable parts according to the following standards:

Description	Code
- Generator	IEC 60034
- Transformer, oil-type	IEC 60076
- Transformer, dry-type	IEC 60076
- MV switchgear	IEC 62271-200 or IEC 62271
- LV switchgear	IEC 61439-2
- Enclosure protection	IEC 60529
- WOIS workstation hardware	IEC 60950
- WOIS workstation software	Applicable parts of VDE 3699
- Earthing network	IEEE 80
- Control panels	IEC 60439-1
- PLC software	IEC 61131-3
- Lighting installation	IEC 60598
- Fire detection	EN 54
- Protection against lightning	IEC 62305

Abbreviations

IEC:	International Electrotechnical Commission
IEEE:	Institute of Electrical and Electronics Engineers
EN:	European Standard
VDE:	The Association for Electrical, Electronic & Information Technologies
WOIS	Wärtsilä Operator's Interface System

A POWER GENERATION EQUIPMENT
A1 GENERATING SET


Figure 2 Example of a Wärtsilä 18V50SG generating set arrangement

The W18V50SG engine and generator are mounted on base frames. The base frames are flexibly mounted on a concrete foundation by means of steel springs.

The main dimensions of the W18V50SG generating set are⁸:

Length	18.781	m
Width	4.09	m
Height	6.02	m
Weight (dry)	364870	kg
Weight (wet)	379870	kg

A1.1 ENGINE
Wärtsilä 18V50SG engine
General engine description

The Wärtsilä 50SG engine is a spark-ignited lean-burn gas engine. The engine works according to the Otto cycle. Gas is mixed with air before the inlet valves, and the gas-air mixture is compressed during the compression phase. Gas is also fed into a small pre-chamber, where the gas mixture is rich compared to the gas in the cylinder. At the end of the compression phase, a spark plug ignites the gas-air mixture in the pre-chamber. The flames from the nozzle of the pre-chamber ignite the gas-air mixture in the whole cylinder. After the working phase, the exhaust gas valves open, and the cylinder is emptied of exhaust gases. The intake air is turbocharged and intercooled.

⁸ The dimensions and weight may vary depending on the generator make and type.

Due to a high degree of integrated functions on the engine, only a minimum amount of support from external systems is needed, thus minimising the interconnections to external systems. An embedded engine control system controls the combustion process individually in each cylinder.

The engine is designed for continuous operation on gas

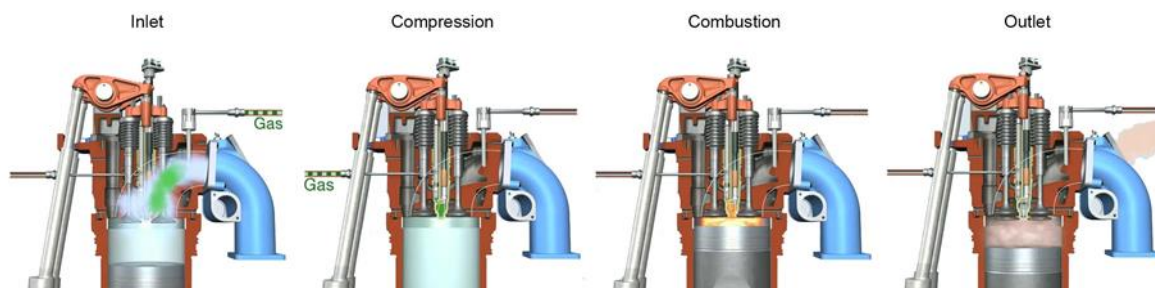


Figure 3 The combustion process

Engine main data

Configuration	V
Number of cylinders	18
Cylinder bore	500 mm
Stroke	580 mm
Speed	500 rpm
Mean effective pressure	22 kPa
Mean piston speed	9.67 m/s
Compression ratio	11.5:1
Number of inlet valves	2
Number of outlet valves	2
Direction of rotation facing towards flywheel	Clockwise

Engine block

The engine block is made of nodular cast iron and is cast in one piece; it incorporates the jacket water manifold and the camshaft bearing housings. The crankshaft is underslung-mounted on the engine block.

The bearing caps, also made of nodular cast iron are fixed from below by hydraulically tightened screws. They are laterally guided by the engine block both at the bottom and at the top. The horizontal side screws at the lower guiding are hydraulically tightened as well. Together this provides a very rigid crankshaft bearing. A combined flywheel/thrust bearing is located at the driving end of the engine.

The oil sump is of a light welded design, and mounted below the engine block. It is sealed by O-rings.

Crankshaft

The crankshaft is made of high tensile steel, and forged in one piece. It is fully balanced to counteract bearing loads from eccentric masses. The high degree of balance results in an even and thick oil film for all bearings.

Connecting rod

The connecting rod is made of forged alloy steel and it is partially machined. All connecting rod bolts are hydraulically tightened. The gudgeon pin bearing is of tri-metal type. Oil is led to the gudgeon pin bearing and piston through a bore in the connecting rod. The connecting rod is of a three-piece design, which makes it possible to unmount the piston without opening the big end bearing.

Main bearings and big end bearings

The main bearings and the big end bearings are of tri-metal design, with a soft and thick running layer.

Cylinder liner

The cylinder liners are centrifugally cast from a special alloyed iron to create wear resistance and high strength. The top collar of the cylinder liner is provided with bore cooling for efficient control of the liner temperature. The liner is equipped with an anti-polishing ring at the top, to prevent bore polishing.

Piston

The piston is of composite type with a steel crown and a nodular cast skirt. The piston skirt and cylinder liner are lubricated by a unique piston skirt lubricating system. The piston top is cooled by the cooling gallery design. The piston ring grooves are hardened. The piston ring set consists of two compression rings and one spring-loaded oil scraper ring. The piston rings are located in the piston crown.

Cylinder head

The cylinder head is made of nodular cast iron, and it is fixed to the cylinder block/liner with hydraulically tightened bolts. Each cylinder head has two inlet and two exhaust valves; all valves are equipped with rotators. The exhaust valve seats are directly water cooled. The valve seat rings are made of specially alloyed iron with good wear resistance.

Camshaft and valve mechanism

The cams are integrated in the drop-forged shaft material. The journal bearings consist of separate pieces, which are fitted to the camshaft pieces by flange connections. This solution makes it possible to remove individual cylinder camshaft pieces sideways. The camshaft bearing housings are integrated in the engine block casting. The camshaft is driven from the crankshaft through a fully integrated gear train.

Fuel gas admission system

On the engine, the fuel gas is supplied through common pipes along the engine, and continues with individual feed pipes to each main gas admission valve. There are two common pipes per bank, one for the main gas, and one for the pre-chamber gas supply. The gas pressure in both lines is controlled separately and there is a filter before every gas admission valve.

The main fuel gas is mixed with the intake air before the inlet valve in the cylinder head. Since the gas valve is timed independently of the inlet valve, scavenging of the cylinder takes place without a risk that unburned gas escapes directly from the inlet side to the exhaust side.

The gas admission system is dynamically controlled to maintain the required load and speed. The quantity of main fuel gas admitted to each cylinder is constantly controlled with the combustion pressure and temperature by means of individual gas admission valves for each cylinder.

The **main fuel gas admission valves** function as the engine speed regulator, and the valves control the amount of gas fed to each cylinder of the engine. Each cylinder is equipped with its own fuel gas admission valve. The valve is located on the cylinder head manifold and the gas is fed into the inlet channel of the cylinder head. The main gas valve is a direct actuated solenoid valve. It is possible to adjust the amount of gas fed to the individual cylinders with the engine automation system when the engine is running.

The **pre-chamber gas control valve** is mechanically actuated by the inlet valve yoke, which is directly driven by the camshaft/push rod. It takes care of the gas admission to the pre-chamber. The valve is located in the pre-chamber, and the amount of injected gas is controlled by the gas pressure.

The **pre-chamber** is the ignition source for the main fuel charge. The pre-chamber is optimised to give the best possible ignition, with rapid and repeatable combustion.

Ignition system

An ignition module located on top of each cylinder head cover contains the ignition coil. The module is connected to the spark plug with a high-voltage extension. The spark plug is a high-energy type, specially manufactured for use in gas engines. The spark plug is located in the pre-chamber, and the timing for the spark is controlled by the engine control system.

Lubricating oil system

The engine has a wet oil sump system. The system lubricates the main bearings and the cylinder liners in the engine. Oil is led through bores in the engine block, and heads to other lubricating points like the camshaft bearings, the rocker arm bearings and the valve mechanism gear wheel bearings. The turbochargers are also connected to the engine lubricating system. Furthermore, the lubricating oil is also cools the piston crowns.

The lubricating oil system built on the engine comprises the following equipment:

- Pipes made of steel
- Oil sump of wet type, equipped with a low-level switch connected to the engine automation system
- Main lubricating pump equipped with an overflow valve. The pump is of screw type
- Start-up/running-in filters in the oil inlet line to each main bearing. These are removed after the engine is commissioned

Starting Air System

The engine is started with compressed air, with a nominal pressure of 30 bar. The start is performed by directing air into the cylinders through starting air valves in the cylinder heads. The starting system includes a slow turning system, which directs a few engine revolutions in the beginning of the starting sequence, as a safety check.

The starting air system built on the engine comprises the following equipment:

- Pipes made of steel
- Starting air master valve, electrically and manually operated
- Start blocking valve to prevent starting when turning gear is engaged
- Starting air distributor
- Starting air valves in A-bank cylinder heads
- Slow turning device
- Flame arrestors

Cooling water system description

The engine is cooled by a closed circuit cooling water system, divided into a high temperature (HT) circuit and a low temperature (LT) circuit.

Thermostatic valves control the LT water inlet, and HT water outlet temperatures. The cooling water is cooled in a separate cooler in the external cooling water system.

The engines are equipped with a two-stage charge air cooling system. The cooler is built onto the engine.

The engine cooling water system is comprised of the following equipment:

- Pipes made of steel
- Engine-driven circulating water pump for the low temperature cooling circuit
- Engine-driven circulating water pump for the high temperature cooling circuit
- Non-return valves after the circulating pumps

Charge air system

The compressor side of the turbocharger feeds air into the cylinders through the charge air cooler and the charge air receiver. The engine is equipped with one turbocharger per cylinder bank. The turbocharger is of the axial turbine type.

The engine charge air system comprises the following equipment:

- Compressor on the turbochargers
- First stage charge air cooler
- Second stage charge air cooler
- Fresh water cleaning device for the compressor

Exhaust gas system

The engine mounted Mono-SPEX (Single Pipe Exhaust system) gas pipes, made of cast iron, with separate sections for two pairs of cylinders. Stainless steel bellows are installed between the sections to absorb heat expansion, and the pipes are fixed by brackets. The engine exhaust gas pipes are fully covered by an insulation box. There are sensors for remote measuring of the temperature after each cylinder, and on both sides of the turbochargers.

The exhaust gas system comprises the following equipment:

- Mono-SPEX system manifold with bellows
- Flexibly mounted insulation box
- Turbine on the turbocharger
- Fresh water cleaning device for the turbine

Turbocharger and air-fuel ratio control system

To maintain a correct air-fuel ratio, the engine is equipped with an exhaust gas wastegate. It keeps the air pressure in the receiver at an optimal level to match the best power output with the emission requirements.

The exhaust gas wastegate valve by-passes the exhaust gases past the turbocharger. The wastegate valve works as a regulator and adjusts the air-fuel ratio to the correct value, independent of variations in the site conditions, such as ambient temperature, humidity and altitude.

The wastegate valve is actuated by compressed air and controlled by the engine control system.

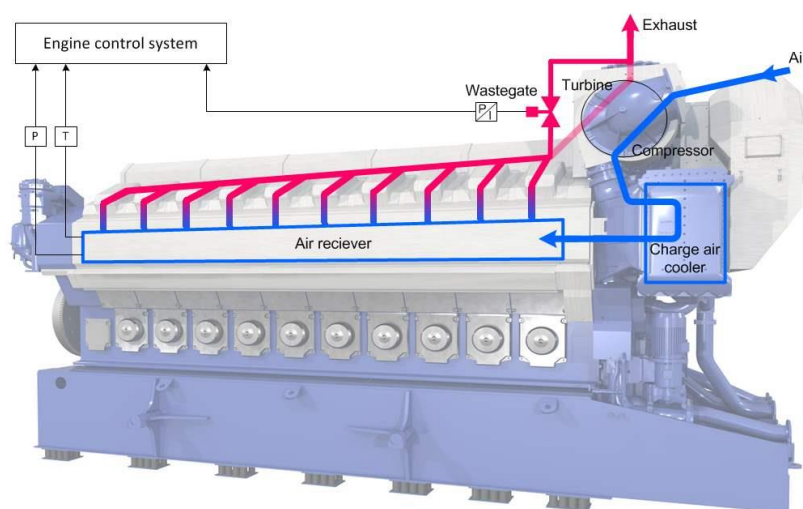


Figure 4 Illustration showing the charge air and exhaust gas system

Wärtsilä Engine Automation

The engine automation system is a completely embedded management system. The engine control system is a distributed and bus-based system where the monitoring and control function is placed close to the point of measurement and control. In this way, both the on- and off-engine wiring is significantly simplified. Advanced diagnostics and control functions provide outstanding performance, and the need for systems outside the engine is significantly reduced.

For the field bus interconnection, Wärtsilä is committed to open standards. The physical interface of the engine control system is a standard Ethernet connection for general process data, to both the WOIS workstation (Wärtsilä Operator's Interface System) and the PLC systems. The system meets even the highest requirements on reliability, with selective redundancy and fault-tolerant design.

The gas admission duration is dynamically controlled by the internal speed controller, to obtain pre-set speed or load reference levels. The quantity of main gas admitted to each cylinder is controlled by cylinder-individual gas admission valves, which are actuated by the CCM cylinder control modules. The amount of gas admitted depends on the gas supply pressure and the time the main gas solenoid valve is open (duration)

High Pmax control strategy is the primary method to adjust the duration of cylinder-specific gas admission.

Hardware of the engine automation system

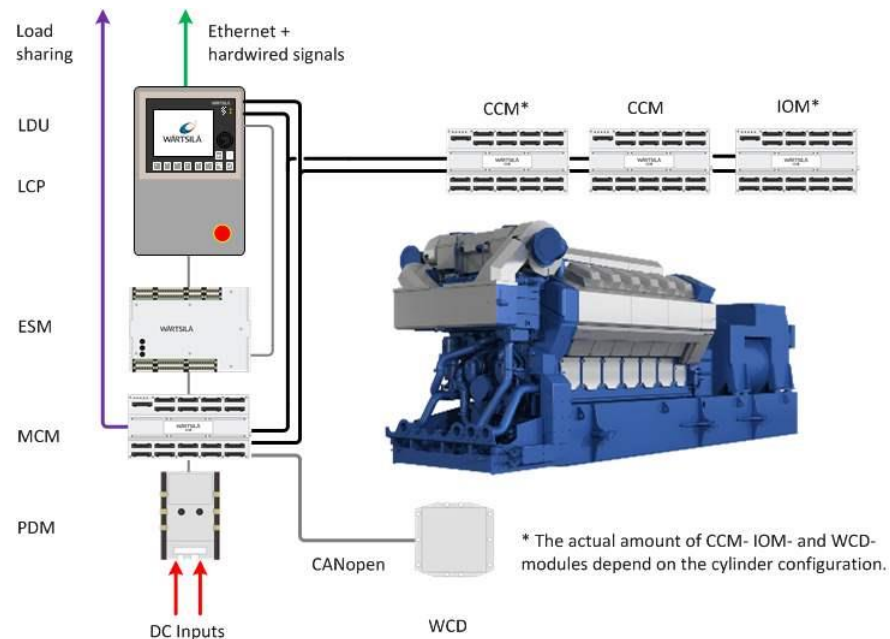


Figure 5 Hardware of the engine automation system

The engine automation system comprises the following main equipment:

- ESM safety module
- LDU graphical display for complete on-engine monitoring and communication interface to the plant automation system
- MCM main controller for speed governing, start/stop sequencing and overall engine management
- IOM I/O modules for distributed data acquisition
- CCM cylinder control modules for injector/gas valve control and real-time diagnostics
- PDM distributes, filters, and handles fusing of power supply
- WCD ignition system module
- Sensors
- Actuators & valves

The automation system handles the following major tasks and functions:

- Local interface to the operator, including a local display which indicates all important engine measurements, an hour-counter, and a local control panel.
- Engine start/stop management, including start block handling and slow turning, load reduction, wastegate control, and the LT/HT thermostatic valve control.
- Engine safety (alarms, shut-downs, emergency stops, load reductions) including hard-wired safety for engine overspeed, lube oil pressure, cooling water temperature, and external shut-downs.
- Electronic speed/load control with various operation modes.

Sensors for alarm and monitoring

One set of sensors fitted on the engine, which are connected to the external engine control system.

Other Included Items

- Flywheel with fixing bolts
- Electric motor-driven turning device
- Counter flanges for pipe connection
- Crankcase safety relief valves with a flame trap
- The engine has one coat of priming paint and one coat of finishing paint

Engine base frame

The engine is rigidly mounted on the engine base frame. The base frame is a rigid welded steel box construction. The engine part and generator part of the common base frame is bolted together at site to form one rigid base frame.

Flexible connections between engine and external piping

To minimise the transmission of engine vibrations to the plant's piping systems, flexible hoses and bellows are provided for installation between the generating set and external piping systems.

Flexible connections are supplied for the following auxiliary systems:

- Starting/control air
- Cooling water
- Lubricating oil
- Exhaust gas
- Fuel
- Crankcase ventilation

Generator base frame

The generator is rigidly mounted on the generator base frame. The frame is made of welded steel.

The generator part and the engine part of the common base frame are bolted together on-site to form one rigid base frame.

Set steel springs

Steel spring type vibration isolation units are installed between the common base frame and the concrete foundation block. The number of steel spring units for each type of generating set is determined by the weight of the generating set and an analysis of the natural frequency of the rigid body. A fitting plate is installed between the common base frame and the steel spring packages to adjust to the level of the surface of the foundation block.

Engine maintenance platform - prefabricated

Partly prefabricated maintenance platforms are provided for easy maintenance and access to the engine. To minimise vibrations, the platforms and stairs are freestanding on the floor and not connected to the engine.

A1.2 GENERATOR

Generator - 11000 V

Generator type

The generator is of the synchronous, three-phase, brushless, salient pole type.

Generator main data

Generator apparent power	23019	kVA
Rated power factor	0.8	
Nominal voltage	11000	V
Rated current (In)	1208	A
Voltage adjustment range	±5	%
Frequency	50	Hz
Speed	500	Rpm
Continuous short-circuit current	>2.5 x In	
Insulation class	F	
Temperature rise stator	F	
Temperature rise rotor	F	
Cooling method	Air cooled	
Enclosure	IP23	
Standard	IEC60034	

Generator construction

The generator is designed to operate together with a reciprocating engine. The stator frame is constructed with a rigid welded steel structure. The stator core is built of thin electric steel sheet laminations. The rotor consists of a shaft and salient pole type main revolving field.

The generator achieves very high efficiency because of the exceptional thermal conductivity created by the tight fit between the coils and the stator core.

Terminals

The six stator winding ends are brought to terminal boxes on the generator sides. Terminals for monitoring and auxiliary equipment have separate terminal boxes.

Damper winding

The generator is provided with a damper winding for parallel operation with other generators and with a separate power grid, if so connected.

Shaft and bearing

The generator is horizontally mounted and provided with two sleeve bearings. The generator rotor is designed to minimise the effect of torsion rotor oscillations due to system disturbances and rapid load changes.

Excitation

The exciter is of the brushless type with a rotating armature/rectifier assembled on the same shaft as the main generator rotating armature. The exciter field is controlled by the automatic voltage regulator (AVR). The rectifiers are of the silicon diode type in a full wave bridge arrangement. The rotating armature and stationary field of the exciter are insulated with Class F materials.

Cooling (air-cooled)

The generator is air-cooled. A fan mounted on the generator shaft takes cooling air from the engine hall, through washable filters, and passes it through the generator.

Automatic voltage regulator

The voltage regulator is a completely solid state type for control of generator voltage by means of controlling the exciter field. The regulator controls the generator exciter field as required to maintain a constant and stable generator output voltage. (The AVR is installed in the generating set control panel).

Voltage regulation accuracy	± 0.5	%
- within power range	0 – 100	%
- within speed range	95 – 105	%
Voltage setting range	90 – 110	%

Accessories

The following accessories are included with the generator:

6	PT-100 elements in stator windings
2	PT-100 elements for bearings
1	Anti-condensation heater
1	Voltage transformer for excitation power and measurement
1	Current transformer for measurement
3	Current transformers for protection

Flexible coupling

A flexible coupling is used between the engine flywheel and the generator which transmits the torque from the engine to the generator. By using a flexible coupling, the crankshaft is not loaded by any external bending forces. The elements in the coupling are made of radially arranged steel spring packs.

Flywheel cover

A flywheel cover is installed over the flywheel and flexible coupling to prevent access to the rotating equipment during operation.

A2

MECHANICAL AUXILIARY SYSTEMS

Proper function of the Modular power plant depends on the mechanical auxiliary systems. The proposed systems have been optimised for this particular application. The function of these systems is to provide the engine with fuel, lubricating oil, starting air, cooling water, and charge air, of the required quantity and quality, as well as to dispose of exhaust gases in a proper manner.

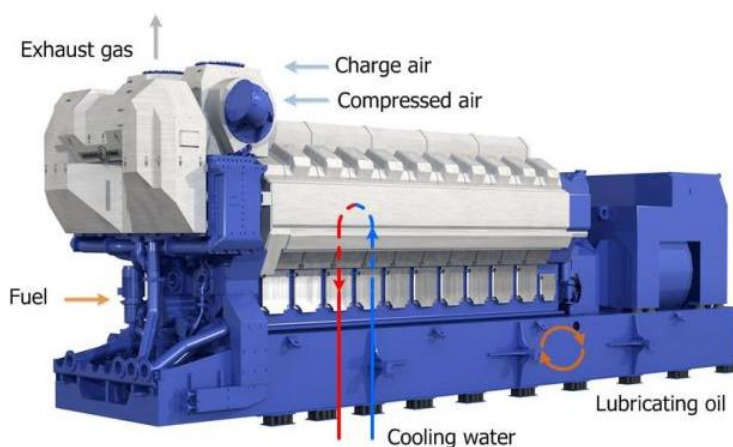


Figure 6 Mechanical auxiliary systems for the engine

A2.1

AUXILIARY MODULES

To ensure installation quality and reduce erection time, Wärtsilä has developed prefabricated auxiliary modules. These modules contain several pieces of auxiliary equipment. This saves significant pipefitting and installation time on-site. The complete module is pressure- and function-tested, then flushed, painted, and corrosion-protected prior to shipment. All external connection points are sealed and covered with steel plates.

Engine auxiliary module

The Engine auxiliary module include several pieces of auxiliary equipment (listed below), and handles the flow of lubricating oil, cooling water and compressed air to and from the engine. The Engine auxiliary module is installed in the front end of the engine with flexible pipe connections.



Figure 7 Example of a typical Engine auxiliary module

The Engine auxiliary module includes the following main equipment:

- 1 Turbo cleaning water supply
- 1 Lubricating oil heat exchanger
- 1 Lubricating oil automatic filter
- 1 Pre lubricating oil pump
- 1 Lubricating oil thermostatic valve
- 1 High temperature circuit preheating unit
- 1 Low temperature thermostatic valve
- 1 High temperature thermostatic valve
- 1 Auxiliary module panel
- 1 Set piping
- 1 Set valves and gauges

Exhaust gas module

The exhaust gas module includes the auxiliary equipment listed below, and handles the flow of charge air to the engine, and exhaust gas from the engine.



Figure 8 Illustration of a typical exhaust gas module

The exhaust gas module includes the following main equipment:

- 1 Low temperature circuit expansion vessel
- 2 Charge air silencer
- 1 Exhaust gas branch pipe
- 1 Exhaust gas ventilation fan

Pipe rack

The pipe rack connects the auxiliary systems of different generating sets to each other.

Engine auxiliary module platform

A2.2 FUEL SYSTEM

The fuel system provides the engine(s) with fuel of the correct flow, pressure and degree of purity.

A2.2.6 Gas system

The purpose of the fuel gas system is to supply the engine with a constant gas feed of suitable pressure, temperature, and cleanness. It should also shut off the gas supply if any problem arises, and provide ventilation of trapped gas.

The power plant is designed for continuous operation on gas, and the gas system is designed for the agreed project gas fuel quality specified in Section 0.4

The gas fuel system consists of the following equipment:

Main safety shut off valve - engine specific

The main safety shut-off valve unit isolates the gas system in case of an emergency, and the unit is located on the gas inlet pipe outside the engine hall.

- | | |
|---|---------------------------------------|
| 1 | Pneumatically operated shut-off valve |
| 1 | Manually operated shut-off valve |

Gas regulating unit

Each engine is equipped with a gas regulating unit which controls the gas feed pressure to the engine depending on the engine load. The gas regulating unit performs a leakage test of the main shut-off valves after every engine stop or shut-down. There is a separate pressure control line for the gas delivered to the prechamber.



Figure 9 Example of a gas regulating unit

The following components are built onto a steel frame:

- Gas filter
- Manual and automatic vent valves
- Control valve(s)
- Instrumentation

Flow meter for gas regulating unit

The gas regulating unit is equipped with a mass flow meter. The meter has an accuracy of 0.5 % at full load.

A2.3 LUBRICATING OIL SYSTEM

The lubricating oil system provides required lubrication for all moving parts on the engine. It consists of the engine's lubricating oil system, which handles the cooling and filtration of the

lubricating oil for the engine itself, and the plant-related lubricating oil system, which handles storage of new and used lubricating oil.

The lubricating oil system consists of the following equipment:

1 Lubricating oil transfer pump - stationary

The transfer pump unit pumps lubricating oil from the storage tank to the engines when topping up or changing oil. The transfer pumps and auxiliary equipment are built on a steel frame, which forms a compact skid unit.

The transfer pump unit consists of the following equipment:

- | | | |
|---|---|-------|
| 2 | Electric motor-driven transfer pumps | |
| | Pressure | 2 bar |
| | Single strainer on pump suction side | |
| | Thermometer on pump suction side | |
| | Local control panel | |
| | Set of interconnection pipes, flanges, seals and valves | |

Lubricating oil transfer pump mobile

The transfer pump unit pumps lubricating oil to and from the engine when topping up or changing oil, or transfers oil to and from drums as needed. The transfer pumps and auxiliary equipment are built on a wheeled dolly.

- | | | |
|---|---|-----------------------|
| 1 | Electric motor-driven transfer pump | |
| | Capacity | 8.1 m ³ /h |
| | Pressure | 2 bar |
| 1 | Single strainers on pump suction side | |
| 1 | Thermometer on pump suction side | |
| 1 | Local control panel | |
| 1 | Wheeled dolly | |
| 1 | Set of interconnection pipes, flanges, seals and valves | |



Figure 10 Example of a mobile lubricating oil transfer pump unit

Oil mist separator

Lubricating oil heat exchanger (mounted on the Engine auxiliary module)

The lubricating oil heat exchanger is of plate-and-frame type.

Lubricating oil automatic filter (mounted on the Engine auxiliary module)

The automatic lubricating oil filter is of the self-cleaning type. The cleaning is done by automatic back-flushing. The flushed oil is led to the engine sump.

Pre lubricating oil pump (mounted on the Engine auxiliary module)

Before the engine is started the complete oil system must be filled and the engine adequately primed by the pre-lubricating pump. The pre-lubricating pump is an electric motor-driven pump equipped with a built-on relief valve.

Lubricating oil thermostatic valve (mounted on the Engine auxiliary module)

The thermostatic valve controls the oil temperature to obtain the right temperature before entering the engine.

A2.4 COMPRESSED AIR SYSTEM

Compressed air is produced by a starting air compressor unit and stored in starting air bottles, while instrument air of higher quality is produced in an instrument air compressor unit.

The pressure equipment is designed, manufactured and tested according to the European Union directive 97/23/EC "Pressure Equipment Directive".

The compressed air system consists of the following equipment:

2 Instrument air compressor unit

The instrument air compressor unit produces control, instrument and working air. The compressed air is stored in the built-on air bottle until it is distributed to the different consumers.

The following components are built onto a steel frame, which forms a compact skid unit:

Electric motor-driven air compressor		
Capacity, each	162	m ³ /h
Pressure	7	bar
Compressed air receiver		
Volume	0.2	m ³
Refrigerated air dryer with control panel		
Dew point	+4	°C
Filter for removal of oil, water and particles		
Common control panel		
Set of interconnection pipes, flanges, seals and valves		



Figure 11 Example of an instrument air compressor unit

1 Starting air compressor unit - single

The starting air compressor units are sized to fill the starting air bottle(s) with the required air for 19 start attempts per total amount of engines in 60 minutes. The starting air compressor and auxiliary equipment are built on a steel frame, which forms a compact skid unit.

The starting air compressor unit consists of the following equipment:

1	Electric motor-driven air compressor		
	Capacity	185	m ³ /h
	Pressure	30	bar
	Pressure switches for starting and stopping the air compressor (24/30 bar)		
	Alarm switch for too-low starting air pressure to engine (18 bar)		
	Oil and water separators		
	Control centres for manual and automatic operation		
	Pressure reduction valves for control and working air (30/6 bar)		
	Set of interconnection pipes, flanges, seals and valves		



Figure 12 Example of a single starting air compressor unit

1 Starting air compressor unit - double

The starting air compressor units are sized to fill the starting air bottle(s) with the required air for 19 start attempts per total amount of engines in 60 minutes. One compressor is in stand-by. The starting air compressors and auxiliary equipment are built on a steel frame, which forms a compact skid unit.

The starting air compressor unit consists of the following equipment:

1	Electric motor-driven air compressors: working		
	Capacity	185	m ³ /h
	Pressure	30	bar
1	Electric motor-driven air compressor: in stand-by		
	Capacity	185	m ³ /h
	Pressure	30	bar
	Pressure switches for starting and stopping the air compressor (24/30 bar)		
	Alarm switches for too-low starting air pressure to engine (18 bar)		
	Oil and water separators		
	Control centres for manual and automatic operation		
	Pressure reduction valves for control and working air (30/6 bar)		
	Set of interconnection pipes, flanges, seals and valves		



Figure 13 Example of a double starting air compressor unit

MANAGEMENT SYSTEM CERTIFICATE

Certificate No:
248445-2017-AQ-FIN-FINAS

Initial certification date:
25 October 2017

Valid:
25 October 2017 - 25 October 2020

This is to certify that the management system of

Wärtsilä Energy Solutions

Wärtsilä Finland Oy

Puotikuja 1, 65380 Vaasa, Finland

and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Quality Management System standard:

ISO 9001:2015

This certificate is valid for the following scope:

Solution and product development and delivery, marketing, sales, engineering, project management, sourcing, procurement, logistics, installation, construction, commissioning, warranty and support functions of energy products and solutions.

Place and date:
Espoo, 25 October 2017



For the issuing office:
DNV GL Business Assurance Finland Oy Ab

Kimmo Haarala
Management Representative



Certificate No: 248445-2017-AQ-FIN-FINAS
Place and date: Espoo, 25 October 2017

Appendix to Certificate

Wärtsilä Energy Solutions Wärtsilä Finland Oy

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PT. Wärtsilä Indonesia (Jakarta)	Jl. H.R. Rasuna Said Kav 3 - 4, Jakarta, Indonesia, 12940	Project management, sales and marketing, administration, installation and construction, commissioning of energy products and solutions.
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Wartsila Bangladesh Ltd	SMC Tower (3rd Floor), 33 Banani C/A, Dhaka, Bangladesh, 1213	Administration, sales and marketing of energy products and solutions.
Wartsila Brasil Ltda	Rua Alfândega, 33, 20070-000, Rio De Janeiro, Brazil	Administration, sales and marketing, project management, logistics, installation and construction, commissioning of energy products and solutions.
Wartsila Caribbean, Inc.	PO Box 7039, Carolina, 00987, Puerto Rico	Sales and marketing of energy products and solutions.
Wartsila Ecuador S.A.	La Mancha Business Center, 17050, Quito, Ecuador	Sales and marketing of energy products and solutions.
Wartsila Gulf FZE	Dubai Investment Park, Plot 597-572, 61494, Dubai, United Arab Emirates	Solution and product development, administration, project management, sales and marketing, support functions of energy products and solutions.
Wartsila Muscat LLC	PO Box 212, Bukha, 812, Musandam, Nigeria	Administration, installation and construction of energy products and solutions.
Wartsila Power Contractin	805B, Bin Homran Center, Jeddah, Saudi Arabia, 23432	Sales and marketing, project management, logistics, administration and support functions of energy products and solutions.
Wärtsilä Argentina S.A.	Tronador 963, 1427, Capital Federal, Argentina	Sales and marketing, project management, administration of energy products and solutions.
Wärtsilä Australia Pty Ltd	48 Huntingwood Drive, Huntingwood, 2148, Australia	Administration, sales and marketing of energy products and solutions.

Certificate No: 248445-2017-AQ-FIN-FINAS
Place and date: Espoo, 25 October 2017

Wärtsilä Canada Inc.	1771 Savage Road, Richmond, V6V 1R1, Canada	Installation and construction of energy products and solutions.
Wärtsilä Danmark A/S	Kystvejen 100, 9400, Nørresundby, Denmark	Sales and marketing of energy products and solutions.
Wärtsilä Deutschland GmbH	Schlenzigstr. 6, 21107 Hamburg, Germany	Sales and marketing of energy products and solutions.
Wärtsilä Eastern Africa	ABC Towers, 7A, Nairobi, Kenya, 00800	Sales and marketing of energy products and solutions.
Wärtsilä Finland Oy (Helsinki)	John Stenbergin rantaa 2, 00530 Helsinki, Finland	Solution and product development, sales and marketing, administration, project management, sourcing, procurement, support functions of energy products and solutions.
Wärtsilä Finland Oy (Vaasa, Kruunantie)	Kruunantie 36, rakennus HTV1, 65230 Vaasa, Finland	Sales and marketing of energy products and solutions.
Wärtsilä Finland Oy (Vaasa, Opistokatu)	Opistokatu 7, 65100 Vaasa, Finland	Engineering, solution and product development of energy products and solutions.
Wärtsilä Finland Oy (Vaasa, Puotikuja)	Puotikuja 1, 65380 Vaasa, Finland	Solution and product development and delivery, marketing, sales, engineering, project management, sourcing, procurement, logistics, installation, construction, commissioning, warranty and support functions of energy products and solutions.
Wärtsilä Finland Oy (Vaasa, Tarhaajantie)	Tarhaajantie 2, 65380 Vaasa, Finland	Administration and support functions of energy products and solutions.
Wärtsilä Finland Oy (Vaasa, Yrittäjänkatu)	Yrittäjänkatu, 65380 Vaasa, Finland	Administration, sales and marketing of energy products and solutions.
Wärtsilä France S.A.S (Mulhouse cedex)	100 Quai d'Alger - CS 91210, 68054, Mulhouse cedex, France	Project management of energy products and solutions.
Wärtsilä France S.A.S. (Marseille)	Enceinte Portuaire, porte 4, Site CIMM, 13344, Marseille, France	Sales and marketing of energy products and solutions.
Wärtsilä France S.A.S. (Paris La Defense)	76 route de la Demi Lune, 92057, Paris La Defense, France	Solution and product development. Sales and marketing, administration, project management of energy products and solutions.
Wärtsilä India Private Limited (Chennai)	Shreyas Vriddhi, Chennai - 600032, India	Sales and marketing, engineering, project management, installation and construction, commissioning of energy products and solutions.
Wärtsilä India Private Limited (Noida)	B-37, Tower - A, First Floor, Sector - 1, Noida - 201301, India	Solution and product development, sales and marketing, engineering, sourcing, logistics, commissioning, installation and construction of energy products and solutions.

Certificate No: 248445-2017-AQ-FIN-FINAS
Place and date: Espoo, 25 October 2017

Wärtsilä India Private Limited (Sanpada, Navi Mumbai)	Kesar Solitaire, Plot no. 5, 21st floor, Sector -19, Palm Beach road, Sanpada, Navi Mumbai - 400705, India	Sales and marketing, engineering, project management, installation and construction, commissioning, logistics, support functions of energy products and solutions.
Wärtsilä India Private Limited (Sardar Patel Road)	D.No.1-8-271, Flat No.109, 1st Floor, Sardar Patel Road - 500003, India	Administration, commissioning, sales and marketing, engineering of energy products and solutions.
Wärtsilä India Private Limited (Shilpada, Navi Mumbai)	Opp. Govt. Rest House, Shilpada, Navi Mumbai - 410203, India	Sales and marketing, project management, installation and construction, commissioning, support functions of energy products and solutions.
Wärtsilä India Private Limited (Urwa Stores)	Third Floor - Aura, Urwa Stores - 575006, India	Engineering, project management of energy products and solutions.
Wärtsilä Italia S.p.A (Milano)	Piazza Duca D'Aosta, 8 - 20124 Milano - Italy	Sales and marketing, administration of energy products and solutions.
Wärtsilä Italia S.p.A (San Dorligo Della Valle)	Bagnoli della Rosandra 334 - 34018 San Dorligo Della Valle - Italy	Administration, sourcing, logistics of energy products and solutions.
Wärtsilä Japan Ltd	6500045 - Kobe 6-7-2 Minatojima	Sales and marketing of energy products and solutions.
Wärtsilä M&P Nigeria	Oba Akinjobi Way, 000000, Lagos, Nigeria	Sales and marketing of energy products and solutions.
Wärtsilä Netherlands B.V.	Hanzelaan 95, 8017 JE, Zwolle, Netherlands	Administration, sales and marketing, support functions of energy products and solutions.
Wärtsilä North America Inc. (Annapolis)	900 Bestgate Road, Annapolis, 21401, USA	Solution and product development, sales and marketing, administration of energy products and solutions.
Wärtsilä North America Inc. (Houston)	16330 Air Center Blvd, Houston, 77032, USA	Solution and product development, sales and marketing, project management, installation and construction, commissioning, support functions, administration of energy products and solutions.
Wärtsilä North America Inc. (Houston)	11710 N Gessner Rd, Houston, 77040, USA	Sales and marketing, project management, sourcing, support functions, administration of energy products and solutions.
Wärtsilä North America Inc. (Long Beach)	2140 Technology Place, Long Beach, 90810, USA	Commissioning of energy products and solutions.
Wärtsilä North America Inc. (Mountlake Terrace)	6306 215th St SW Ste 3, Mountlake Terrace, 98043, USA	Sales and marketing of energy products and solutions.
Wärtsilä North America Inc. (Roxborough)	10577 Wildhorse LN, Roxborough, 80125, USA	Sales and marketing of energy products and solutions.
Wärtsilä Oyj Abp	Puotikuja 1, 65380 Vaasa, Finland	Administration and support functions of energy products and solutions.

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Wärtsilä Philippines Inc	No. 6, Diode Street, 4025, Cabuyao, Philippines	Sales and marketing of energy products and solutions.
Wärtsilä Polska Sp. z.oo	Kubickiego 13, 02-954 Warszawa, Poland	Sales and marketing of energy products and solutions.
Wärtsilä Projects Oy (Turku)	Stålarminckatu 45, 20810 Turku, Finland	Project management, sourcing, procurement, logistics, installation and construction, commissioning of energy products and solutions.
Wärtsilä Projects Oy (Vaasa)	Puotikuja 1, 65380 Vaasa, Finland	Sales and marketing, project management, sourcing, procurement, logistics, installation and construction, commissioning, warranty and support functions of energy products and solutions.
Wärtsilä Shanghai Service	Room 1125A, Tower B of Nanxincang Busine, Beijing, China, 100007	Sales and marketing, administration of energy products and solutions.
Wärtsilä Singapore Pte Ltd (Singapore)	11 Pandan Crescent, Singapore, Singapore, 128467	Sales and marketing, support functions, administration of energy products and solutions.
Wärtsilä Singapore Pte Ltd (Singapore)	14 Benoi Crescent, Singapore, Singapore, 128467	Sales and marketing of energy products and solutions.
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Wärtsilä South Africa (Pty) (Johannesburg)	West Tower, Nelson Mandela Square, Johannesburg, South Africa, 2146	Sales and marketing of energy products and solutions.
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Wärtsilä Vostok LLC (Moscow)	4th Dobryninsky lane, 8, office E02-300, Moscow, Russian Federation, 119049	Project management, sales and marketing of energy products and solutions.
Wärtsilä Vostok LLC (Saint Petersburg)	Petrogradskaya emb, 36A, Saint-Petersburg, Russian Federation, 197101	Sales and marketing of energy products and solutions.
Wärtsilä-Enpa A.S.	Aydıntepe Mah. E5 karayolu üzeri - 34947 Istanbul - Turkey	Sales and marketing of energy products and solutions.

MANAGEMENT SYSTEM CERTIFICATE

Certificate No:
248444-2017-AE-FIN-FINAS

Initial certification date:
25 October 2017

Valid:
25 October 2017 - 25 October 2020

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Wärtsilä Energy Solutions

Wärtsilä Finland Oy

Puotikuja 1, 65380 Vaasa, Finland

and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Environmental Management System standard:

ISO 14001:2015

This certificate is valid for the following scope:

Solution and product development and delivery, marketing, sales, engineering, project management, sourcing, procurement, logistics, installation, construction, commissioning, warranty and support functions of energy products and solutions.

Place and date:
Espoo, 25 October 2017



For the issuing office:
DNV GL Business Assurance Finland Oy Ab

Kimmo Haarala
Management Representative



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Wärtsilä Polska Sp. z.oo	Kubickiego 13, 02-954 Warszawa, Poland	Sales and marketing of energy products and solutions.
Wärtsilä Projects Oy (Turku)	Stålarminckatu 45, 20810 Turku, Finland	Project management, sourcing, procurement, logistics, installation and construction, commissioning of energy products and solutions.
Wärtsilä Projects Oy (Vaasa)	Puotikuja 1, 65380 Vaasa, Finland	Sales and marketing, project management, sourcing, procurement, logistics, installation and construction, commissioning, warranty and support functions of energy products and solutions.
Wärtsilä Shanghai Service	Room 1125A, Tower B of Nanxincang Busine, Beijing, China, 100007	Sales and marketing, administration of energy products and solutions.
Wärtsilä Singapore Pte Ltd (Singapore)	11 Pandan Crescent, Singapore, Singapore, 128467	Sales and marketing, support functions, administration of energy products and solutions.
Wärtsilä Singapore Pte Ltd (Singapore)	14 Benoi Crescent, Singapore, Singapore, 128467	Sales and marketing of energy products and solutions.
Wärtsilä South Africa (Pty) (Cape Town)	Dorsetshire Street, Cape Town, South Africa, 7405	Sales and marketing of energy products and solutions.
Wärtsilä South Africa (Pty) (Johannesburg)	West Tower, Nelson Mandela Square, Johannesburg, South Africa, 2146	Sales and marketing of energy products and solutions.
Wärtsilä Sweden AB	Götaverksgatan 10, 402 77, Göteborg, Sweden	Sales and marketing of energy products and solutions.
Wärtsilä UK Ltd.	Wärtsilä UK Ltd., 4 Marples Way, Hants, PO9 1NX, United Kingdom	Installation and construction of energy products and solutions.
Wärtsilä Vostok LLC (Moscow)	4th Dobryninsky lane, 8, office E02-300, Moscow, Russian Federation, 119049	Project management, sales and marketing of energy products and solutions.
Wärtsilä Vostok LLC (Saint Petersburg)	Petrogradskaya emb, 36A, Saint-Petersburg, Russian Federation, 197101	Sales and marketing of energy products and solutions.
Wärtsilä-Enpa A.S.	Aydıntepe Mah. E5 karayolu üzeri - 34947 Istanbul - Turkey	Sales and marketing of energy products and solutions.

MANAGEMENT SYSTEM CERTIFICATE

Certificate No:
248443-2017-AHSO-FIN-FINAS

Initial certification date:
25 October 2017

Valid:
25 October 2017 - 25 October 2020

This is to certify that the management system of

Wärtsilä Energy Solutions

Wärtsilä Finland Oy

Puotikuja 1, 65380 Vaasa, Finland

and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Occupational Health and Safety Management System standard:

OHSAS 18001:2007

This certificate is valid for the following scope:

Solution and product development and delivery, marketing, sales, engineering, project management, sourcing, procurement, logistics, installation, construction, commissioning, warranty and support functions of energy products and solutions.

Place and date:
Espoo, 25 October 2017

For the issuing office:
DNV GL Business Assurance Finland Oy Ab



Kimmo Haarala
Management Representative

Certificate No: 248443-2017-AHSO-FIN-FINAS
Place and date: Espoo, 25 October 2017

Appendix to Certificate

Wärtsilä Energy Solutions Wärtsilä Finland Oy

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Site Name	Site Address	Site Scope
PT. Wärtsilä Indonesia (Jakarta)	GD Tempo LT 19, JI HR Rasuna Said Kav 3 - 4, Jakarta, Indonesia, 15135	Sales and marketing, project management of energy products and solutions.
PT. Wärtsilä Indonesia (Jakarta)	Jl. H.R. Rasuna Said Kav 3 - 4, Jakarta, Indonesia, 12940	Project management, sales and marketing, administration, installation and construction, commissioning of energy products and solutions.
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Wartsila Bangladesh Ltd	SMC Tower (3rd Floor), 33 Banani C/A, Dhaka, Bangladesh, 1213	Administration, sales and marketing of energy products and solutions.
Wartsila Brasil Ltda	Rua Alfândega, 33, 20070-000, Rio De Janeiro, Brazil	Administration, sales and marketing, project management, logistics, installation and construction, commissioning of energy products and solutions.
Wartsila Caribbean, Inc.	PO Box 7039, Carolina, 00987, Puerto Rico	Sales and marketing of energy products and solutions.
Wartsila Ecuador S.A.	La Mancha Business Center, 17050, Quito, Ecuador	Sales and marketing of energy products and solutions.
Wartsila Gulf FZE	Dubai Investment Park, Plot 597-572, 61494, Dubai, United Arab Emirates	Solution and product development, administration, project management, sales and marketing, support functions of energy products and solutions.
Wartsila Muscat LLC	PO Box 212, Bukha, 812, Musandam, Nigeria	Administration, installation and construction of energy products and solutions.
Wartsila Power Contractin	805B, Bin Homran Center, Jeddah, Saudi Arabia, 23432	Sales and marketing, project management, logistics, administration and support functions of energy products and solutions.
Wärtsilä Argentina S.A.	Tronador 963, 1427, Capital Federal, Argentina	Sales and marketing, project management, administration of energy products and solutions.
Wärtsilä Australia Pty Ltd	48 Huntingwood Drive, Huntingwood, 2148, Australia	Administration, sales and marketing of energy products and solutions.

Certificate No: 248443-2017-AHSO-FIN-FINAS
Place and date: Espoo, 25 October 2017

Wärtsilä Canada Inc.	1771 Savage Road, Richmond, V6V 1R1, Canada	Installation and construction of energy products and solutions.
Wärtsilä Danmark A/S	Kystvejen 100, 9400, Nørresundby, Denmark	Sales and marketing of energy products and solutions.
Wärtsilä Deutschland GmbH	Schlenzigstr. 6, 21107 Hamburg, Germany	Sales and marketing of energy products and solutions.
Wärtsilä Eastern Africa	ABC Towers, 7A, Nairobi, Kenya, 00800	Sales and marketing of energy products and solutions.
Wärtsilä Finland Oy (Helsinki)	John Stenbergin rantaa 2, 00530 Helsinki, Finland	Solution and product development, sales and marketing, administration, project management, sourcing, procurement, support functions of energy products and solutions.
Wärtsilä Finland Oy (Vaasa, Kruunantie)	Kruunantie 36, rakennus HTV1, 65230 Vaasa, Finland	Sales and marketing of energy products and solutions.
Wärtsilä Finland Oy (Vaasa, Opistokatu)	Opistokatu 7, 65100 Vaasa, Finland	Engineering, solution and product development of energy products and solutions.
Wärtsilä Finland Oy (Vaasa, Puotikuja)	Puotikuja 1, 65380 Vaasa, Finland	Solution and product development and delivery, marketing, sales, engineering, project management, sourcing, procurement, logistics, installation, construction, commissioning, warranty and support functions of energy products and solutions.
Wärtsilä Finland Oy (Vaasa, Tarhaajantie)	Tarhaajantie 2, 65380 Vaasa, Finland	Administration and support functions of energy products and solutions.
Wärtsilä Finland Oy (Vaasa, Yrittäjänkatu)	Yrittäjänkatu, 65380 Vaasa, Finland	Administration, sales and marketing of energy products and solutions.
Wärtsilä France S.A.S (Mulhouse cedex)	100 Quai d'Alger - CS 91210, 68054, Mulhouse cedex, France	Project management of energy products and solutions.
Wärtsilä France S.A.S. (Marseille)	Enceinte Portuaire, porte 4, Site CIMM, 13344, Marseille, France	Sales and marketing of energy products and solutions.
Wärtsilä France S.A.S. (Paris La Defense)	76 route de la Demi Lune, 92057, Paris La Defense, France	Solution and product development. Sales and marketing, administration, project management of energy products and solutions.
Wärtsilä India Private Limited (Chennai)	Shreyas Vriddhi, Chennai - 600032, India	Sales and marketing, engineering, project management, installation and construction, commissioning of energy products and solutions.
Wärtsilä India Private Limited (Noida)	B-37, Tower - A, First Floor, Sector - 1, Noida - 201301, India	Solution and product development, sales and marketing, engineering, sourcing, logistics, commissioning, installation and construction of energy products and solutions.

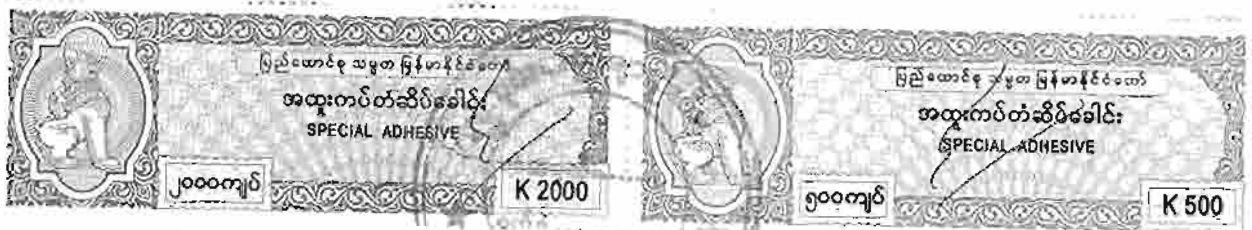
Certificate No: 248443-2017-AHSO-FIN-FINAS
Place and date: Espoo, 25 October 2017

Wärtsilä India Private Limited (Sanpada, Navi Mumbai)	Kesar Solitaire, Plot no. 5, 21st floor, Sector -19, Palm Beach road, Sanpada, Navi Mumbai - 400705, India	Sales and marketing, engineering, project management, installation and construction, commissioning, logistics, support functions of energy products and solutions.
Wärtsilä India Private Limited (Sardar Patel Road)	D.No.1-8-271, Flat No.109, 1st Floor, Sardar Patel Road - 500003, India	Administration, commissioning, sales and marketing, engineering of energy products and solutions.
Wärtsilä India Private Limited (Shilpada, Navi Mumbai)	Opp. Govt. Rest House, Shilpada, Navi Mumbai - 410203, India	Sales and marketing, project management, installation and construction, commissioning, support functions of energy products and solutions.
Wärtsilä India Private Limited (Urwa Stores)	Third Floor - Aura, Urwa Stores - 575006, India	Engineering, project management of energy products and solutions.
Wärtsilä Italia S.p.A (Milano)	Piazza Duca D'Aosta, 8 - 20124 Milano - Italy	Sales and marketing, administration of energy products and solutions.
Wärtsilä Italia S.p.A (San Dorligo Della Valle)	Bagnoli della Rosandra 334 - 34018 San Dorligo Della Valle - Italy	Administration, sourcing, logistics of energy products and solutions.
Wärtsilä Japan Ltd	6500045 - Kobe 6-7-2 Minatojima	Sales and marketing of energy products and solutions.
Wärtsilä M&P Nigeria	Oba Akinjobi Way, 000000, Lagos, Nigeria	Sales and marketing of energy products and solutions.
Wärtsilä Netherlands B.V.	Hanzelaan 95, 8017 JE, Zwolle, Netherlands	Administration, sales and marketing, support functions of energy products and solutions.
Wärtsilä North America Inc. (Annapolis)	900 Bestgate Road, Annapolis, 21401, USA	Solution and product development, sales and marketing, administration of energy products and solutions.
Wärtsilä North America Inc. (Houston)	16330 Air Center Blvd, Houston, 77032, USA	Solution and product development, sales and marketing, project management, installation and construction, commissioning, support functions, administration of energy products and solutions.
Wärtsilä North America Inc. (Houston)	11710 N Gessner Rd, Houston, 77040, USA	Sales and marketing, project management, sourcing, support functions, administration of energy products and solutions.
Wärtsilä North America Inc. (Long Beach)	2140 Technology Place, Long Beach, 90810, USA	Commissioning of energy products and solutions.
Wärtsilä North America Inc. (Mountlake Terrace)	6306 215th St SW Ste 3, Mountlake Terrace, 98043, USA	Sales and marketing of energy products and solutions.
Wärtsilä North America Inc. (Roxborough)	10577 Wildhorse LN, Roxborough, 80125, USA	Sales and marketing of energy products and solutions.
Wärtsilä Oyj Abp	Puotikuja 1, 65380 Vaasa, Finland	Administration and support functions of energy products and solutions.

Certificate No: 248443-2017-AHSO-FIN-FINAS
Place and date: Espoo, 25 October 2017

Wärtsilä Pakistan (Pvt.)	16 Km Raiwind Road, Lahore, 54000, Pakistan	Sales and marketing, Project management, installation and construction, commissioning, administration of energy products and solutions.
Wärtsilä Peru S.A.C.	Av. Ricardo Palma, Lima, Peru, L18	Sales and marketing of energy products and solutions.
Wärtsilä Philippines Inc	No. 6, Diode Street, 4025, Cabuyao, Philippines	Sales and marketing of energy products and solutions.
Wärtsilä Polska Sp. z.oo	Kubickiego 13, 02-954 Warszawa, Poland	Sales and marketing of energy products and solutions.
Wärtsilä Projects Oy (Turku)	Stålarminkatu 45, 20810 Turku, Finland	Project management, sourcing, procurement, logistics, installation and construction, commissioning of energy products and solutions.
Wärtsilä Projects Oy (Vaasa)	Puotikuja 1, 65380 Vaasa, Finland	Sales and marketing, project management, sourcing, procurement, logistics, installation and construction, commissioning, warranty and support functions of energy products and solutions.
Wärtsilä Shanghai Service	Room 1125A, Tower B of Nanxincang Busine, Beijing, China, 100007	Sales and marketing, administration of energy products and solutions.
Wärtsilä Singapore Pte Ltd (Singapore)	11 Pandan Crescent, Singapore, Singapore, 128467	Sales and marketing, support functions, administration of energy products and solutions.
Wärtsilä Singapore Pte Ltd (Singapore)	14 Benoi Crescent, Singapore, Singapore, 128467	Sales and marketing of energy products and solutions.
Wärtsilä South Africa (Pty) (Cape Town)	Dorsetshire Street, Cape Town, South Africa, 7405	Sales and marketing of energy products and solutions.
Wärtsilä South Africa (Pty) (Johannesburg)	West Tower, Nelson Mandela Square, Johannesburg, South Africa, 2146	Sales and marketing of energy products and solutions.
Wärtsilä Sweden AB	Götaverksgatan 10, 402 77, Göteborg, Sweden	Sales and marketing of energy products and solutions.
Wärtsilä UK Ltd.	Wärtsilä UK Ltd., 4 Marples Way, Hants, PO9 1NX, United Kingdom	Installation and construction of energy products and solutions.
Wärtsilä Vostok LLC (Moscow)	4th Dobryninsky lane, 8, office E02-300, Moscow, Russian Federation, 119049	Project management, sales and marketing of energy products and solutions.
Wärtsilä Vostok LLC (Saint Petersburg)	Petrogradskaya emb, 36A, Saint-Petersburg, Russian Federation, 197101	Sales and marketing of energy products and solutions.
Wärtsilä-Enpa A.S.	Aydıntepe Mah. E5 karayolu üzeri - 34947 Istanbul - Turkey	Sales and marketing of energy products and solutions.

Part IV
Proposal Security
Letter of Guarantee from Bank



MYANMA FOREIGN TRADE BANK

80/86 MAHABANDoola GARDEN STREET,
YANGON, MYANMAR

5.3.2018

LETTER OF GUARANTEE

**ELECTRIC POWER GENERATION ENTERPRISE
MINISTRY OF ELECTRICITY AND ENERGY
OFFICE 27, NAY PYI TAW**

Date. - 5 MAR 2018

BID SECURITY NO. 60824 / G / 2017 - 2018 (P) FOR USD 840,000/-

WE HAVE BEEN INFORMED THAT NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD (MYANMAR CHEMICAL & MACHINERY CO., LTD) (HEREINAFTER CALLED 'THE APPLICANT') HAS SUBMITTED OR WILL SUBMIT TO THE BENEFICIARY ITS BID TO YOU ITS SECTION (II) BID DATA SHEET ITB 19.1 (HEREINAFTER CALLED 'THE BID') FOR THE EXECUTION OF SUBSTATION GAS ENGINE UNDER INVITATION FOR TINDER NO. 31/EPGE/G-02/2017-2018 ('THE IFB').

FURTHERMORE, WE UNDERSTAND THAT, ACCORDING TO THE BENEFICIARY'S CONDITIONS, BIDS MUST BE SUPPORTED BY A BID GUARANTEE. AT THE REQUEST OF THE APPLICANT, WE MYANMAR FOREIGN TRADE BANK HEREBY IRREVOCABLY UNDERTAKE TO PAY THE BENEFICIARY ANY SUM OR SUMS NOT EXCEEDING IN TOTAL AN AMOUNT OF USD 840,000/- (UNITED STATE DOLLAR EIGHT HUNDRED FORTY THOUSAND ONLY) UPON RECEIPT BY US OF THE BENEFICIAR'S COMPLYING DEMAND, SUPPORTED BY THE BENEFICIARY'S STATEMENT, WHETHER IN THE DEMAND ITSELF OR A SEPARATE SIGNED DOCUMENT ACCOMPANYING OR IDENTIFYING THE DEMAND, STAING THAT EITHER THE APPLICANT:

- (A) HAS WITHDRAWN ITS BID DURING THE PERIOD OF BID VALIDITY SET FORTH IN THE APPLICANT'S LETTER OF BID ("THE BID VALIDITY PERIOD"), OR ANY EXTENSION THERETO PROVIDED BY THE APPLICANT; OR
- (B) HAVING BEEN NOTIFIED OF THE ACCEPTANCE OF ITS BID BY THE BENEFICIARY DURING THE BID VALIDITY PERIOD OR ANY EXTENSION THERETO PROVIDED BY THE APPLICANT, (I) HAS FAILED TO EXECUTE THE CONTRACT AGREEMENT, OR (II) HAS FAILED TO FURNISH THE PERFORMANCE SECURITY, IN ACCORDANCE WITH THE INSTRUCTIONS TO BIDDERS ("ITB") OF THE BENEFICIARY'S BIDDING DOCUMENT.

THIS GUARANTEE WILL EXPIRE (A) IF THE APPLICANT IS THE SUCCESSFUL BIDDER, UPON OUR RECEIPT OF COPIES OF THE CONTRACT AGREEMENT SIGNED BY THE APPLICANT AND THE PERFORMANCE SECURITY ISSUED TO THE BENEFICIARY IN RELATION TO SUCH CONTRACT AGREEMENT; OR (B) IF THE APPLICANT IS NOT THE SUCCESSFUL BIDDER, UPON THE EARLIER OF (I) OUR RECEIPT OF A COPY OF THE BENEFICIARY'S NOTIFICATION TO THE APPLICANT OF THE RESULTS OF THE BIDDING PROCESS, OR (II) TWENTY- EIGHT (28) DAYS AFTER THE END OF THE BID VALIDITY PERIOD.

CONSEQUENTLY, ANY DEMAND FOR PAYMENT UNDER THIS GUARANTEE MUST BE RECEIVED BY US AT THE OFFICE ABOVE ON OR BEFORE THAT DATE.
(05-10-2018).

THIS GUARANTEE IS SUBJECT TO THE UNIFORM RULES FOR DEMAND GUARANTEES (URDG) 2010 REVISION, ICC PUBLICATION NO. 758.

THIS GUARANTEE MUST BE RETURNED TO US FOR CANCELLATION AS SOON AS ITS EXPIRE.

YOURS FAITHFULLY,
FOR MYANMA FOREIGN TRADE BANK

COUNTERSIGNED



MANAGER
FINANCING & GUARANTEE DEPT;

A handwritten signature in blue ink, likely belonging to the Assistant Manager.

ASSISTANT MANAGER
GUARANTEE DEPT; 15



MYANMA FOREIGN TRADE BANK
80/86 MAHABANDoola GARDEN STREET,
YANGON, MYANMAR

20 FEB 2018

LETTER OF GUARANTEE

**ELECTRIC POWER GENERATION ENTERPRISE
MINISTRY OF ELECTRICITY AND ENERGY
NAY PYI TAW**

Date. 20 FEB 2018

BID SECURITY NO. 60674 / G / 2017 - 2018 (P) FOR USD 560,000/-

WE HAVE BEEN INFORMED THAT MYANMAR CHEMICAL & MACHINERY CO., LTD (HEREINAFTER CALLED 'THE APPLICANT') HAS SUBMITTED OR WILL SUBMIT TO THE BENEFICIARY ITS BID TO YOU ITS SECTION (II) BID DATA SHEET ITB 19.1 (HEREINAFTER CALLED 'THE BID') FOR THE EXECUTION OF SUBSTATION EQUIPMENTS UNDER INVITATION FOR TENDER NO 31/EPGE/G-02/2017-2018 ('THE IFB').

FURTHERMORE, WE UNDERSTAND THAT, ACCORDING TO THE BENEFICIARY'S CONDITIONS, BIDS MUST BE SUPPORTED BY A BID GUARANTEE. AT THE REQUEST OF THE APPLICANT, WE MYANMAR FOREIGN TRADE BANK HEREBY IRREVOCABLY UNDERTAKE TO PAY THE BENEFICIARY ANY SUM OR SUMS NOT EXCEEDING IN TOTAL AN AMOUNT OF USD 560,000/- (UNITED STATE DOLLAR FIVE HUNDRED SIXTY THOUSAND ONLY) UPON RECEIPT BY US OF THE BENEFICIARY'S COMPLYING DEMAND, SUPPORTED BY THE BENEFICIARY'S STATEMENT, WHETHER IN THE DEMAND ITSELF OR A SEPARATE SIGNED DOCUMENT ACCOMPANYING OR IDENTIFYING THE DEMAND, STATING THAT EITHER THE APPLICANT:

- (A) HAS WITHDRAWN ITS BID DURING THE PERIOD OF BID VALIDITY SET FORTH IN THE APPLICANT'S LETTER OF BID ('THE BID VALIDITY PERIOD'), OR ANY EXTENSION THERETO PROVIDED BY THE APPLICANT; OR
- (B) HAVING BEEN NOTIFIED OF THE ACCEPTANCE OF ITS BID BY THE BENEFICIARY DURING THE BID VALIDITY PERIOD OR ANY EXTENSION THERETO PROVIDED BY THE APPLICANT, (I) HAS FAILED TO EXECUTE THE CONTRACT AGREEMENT, OR (II) HAS FAILED TO FURNISH THE PERFORMANCE SECURITY, IN ACCORDANCE WITH THE INSTRUCTIONS TO BIDDERS ('ITB') OF THE BENEFICIARY'S BIDDING DOCUMENT.

THIS GUARANTEE WILL EXPIRE (A) IF THE APPLICANT IS THE SUCCESSFUL BIDDER, UPON OUR RECEIPT OF COPIES OF THE CONTRACT AGREEMENT SIGNED BY THE APPLICANT AND THE PERFORMANCE SECURITY ISSUED TO THE BENEFICIARY IN RELATION TO SUCH CONTRACT AGREEMENT; OR (B) IF THE APPLICANT IS NOT THE SUCCESSFUL BIDDER, UPON THE EARLIER OF (I) OUR RECEIPT OF A COPY OF THE BENEFICIARY'S NOTIFICATION TO THE APPLICANT OF THE RESULTS OF THE BIDDING PROCESS, OR (II) TWENTY- EIGHT (28) DAYS AFTER THE END OF THE BID VALIDITY PERIOD.

CONSEQUENTLY, ANY DEMAND FOR PAYMENT UNDER THIS GUARANTEE MUST BE RECEIVED BY US AT THE OFFICE ABOVE ON OR BEFORE THAT DATE.

(18-9-2018).

THIS GUARANTEE IS SUBJECT TO THE UNIFORM RULES FOR DEMAND GUARANTEES (URDG) 2010 REVISION, ICC PUBLICATION NO. 758.

THIS GUARANTEE MUST BE RETURNED TO US FOR CANCELLATION AS SOON AS ITS EXPIRE.

YOURS FAITHFULLY,
FOR MYANMA FOREIGN TRADE BANK

COUNTERSIGNED



MANAGER
FINANCING & GUARANTEE DEPT;

ASSISTANT MANAGER
GUARANTEE DEPT;

Commercial Proposal for Rental Power

S.No.	Company Name	Load (%)	Proposed Price (2 decimals)		Rental Period	Remark
1	NIHC Consortium	50%	3.10	US cents / kWh	60 months	
2		100%		US cents / kWh		

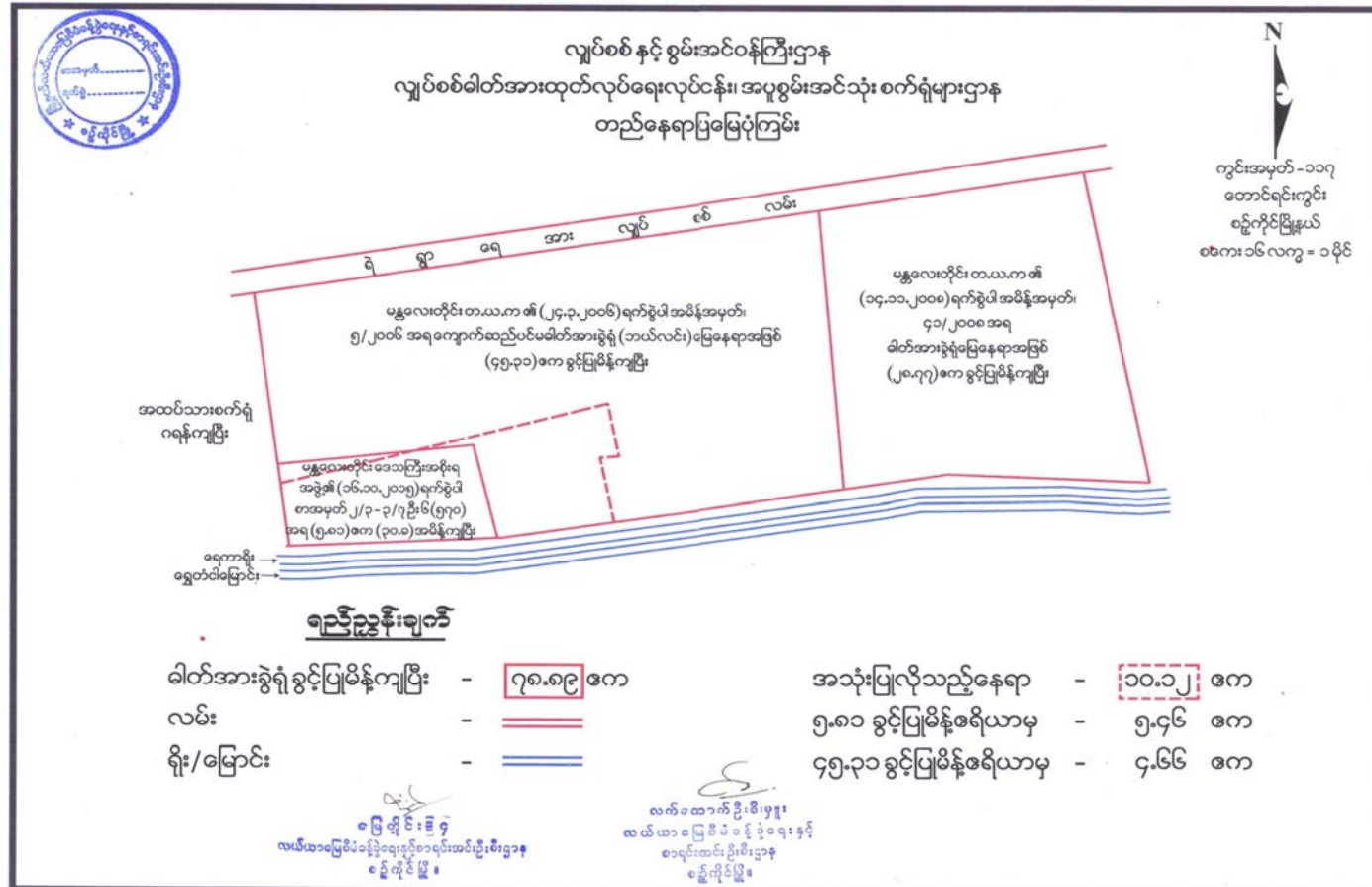
- Custom duties payable in Myanmar shall be included in proposed Tariff.
- All kinds of applicable tax in Myanmar during operation and construction other than custom duties shall be excluded in the tariff for evaluation purpose.
- The successful bidder shall pay all kind of applicable tax including not limited to such as import duties, custom duties, commercial tax, withholding tax, etc. during construction and operation period.
- EPGE shall not pay any kind of applicable tax.

Signature:



Authorized Person: Maung Kyay
 Managing Director
 National Infrastructure Holdings Company

LOCATION MAP FOR 145.49 MW KYAUKSE GAS ENGINES POWER PLANT PROJECT



Coordinate Point

**Fence boundary outcomes (WGS84 coordinate system)
provided by the BPGE**

A	96:9:11.560015, 21:40:7.260007	85.64
B	96:9:12.306304, 21:40:5.070930	84.84
B-1	96:9:13.066956, 21:40:2.784032	81.51
C	96:9:11.026329, 21:40:4.615927	84.44
D	96:9:11.826336, 21:40:2.495923	83.73
E	96:9:5.330012, 21:40:1.010029	84.19
F	96:8:59.160328, 21:40:0.710935	85.00
G	96:8:58.480624, 21:40:3.000079	85.51
TP01	96:8:57.946621, 21:40:10.018921	87.51
TP02	96:8:59.945360, 21:40:3.279625	85.09

**Fence boundary outcomes (myanmar coordinate system)
provided by the BPGE**

A	206385.547	2398859.605	85.64
B	205405.867	2398791.739	84.84
B-1	205427.013	2398721.113	81.51
C	206368.675	2398778.484	84.44
D	206390.522	2398712.886	83.73
E	205202.852	2398670.576	84.19
F	205025.212	2398664.633	85.00
G	205008.955	2398735.436	85.51
TP01	204995.661	2398951.748	87.51
TP02	205049.922	2398741.543	85.09

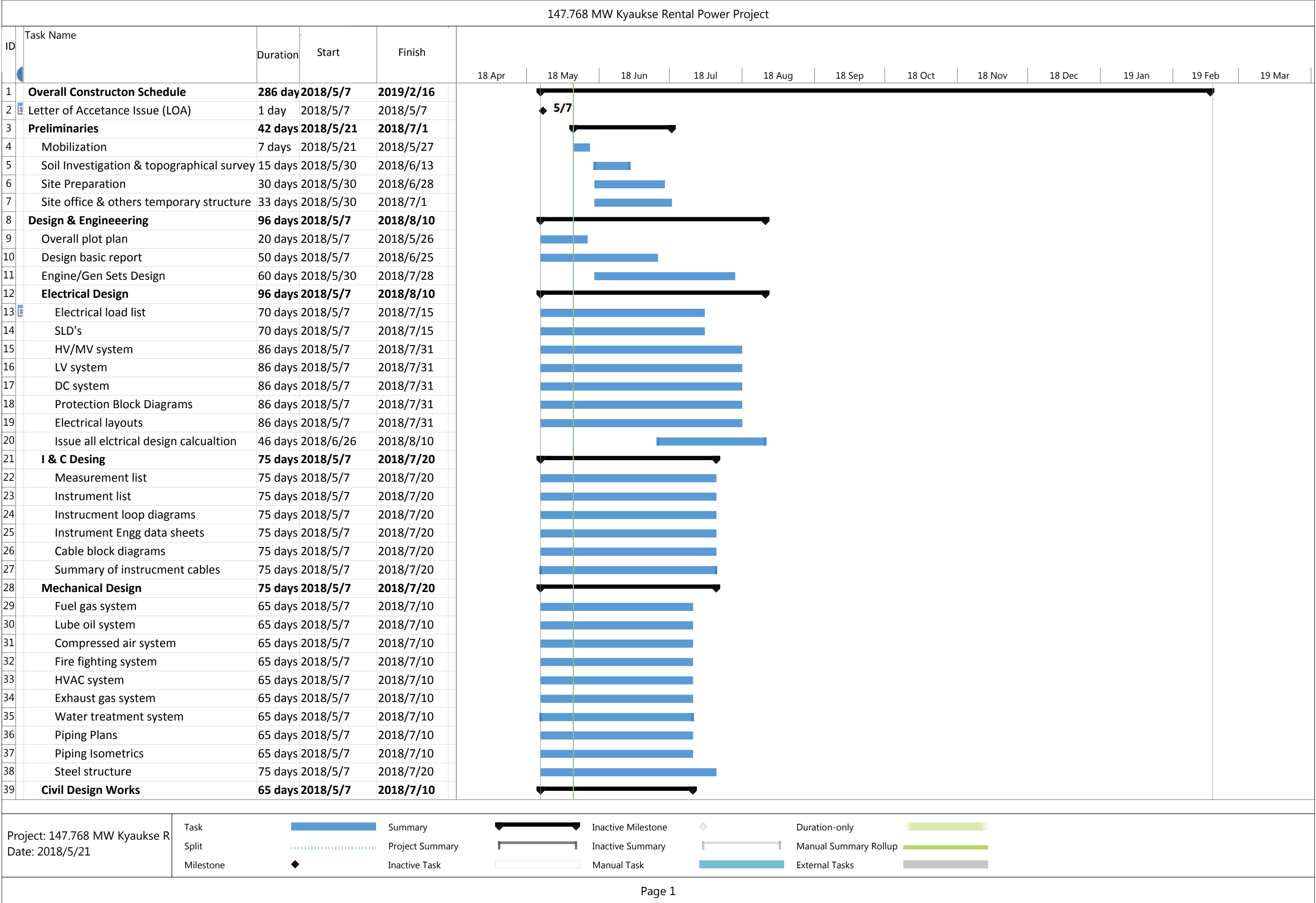
**Fence boundary outcomes (WGS84 coordinate system)
adjusted fence range**

A'	96:9:11.553347, 21:40:7.259008	85.64
B'	96:9:12.302536, 21:40:5.068350	84.84
B-1'	96:9:13.107021, 21:40:2.686391	81.51
C'	96:9:11.026329, 21:40:4.615927	84.44
D'	96:9:11.840483, 21:40:2.409175	83.73
E'	96:9:5.320719, 21:40:1.079741	84.19
F'	96:8:59.159243, 21:40:0.723682	85.00
G'	96:8:58.636968, 21:40:3.033625	85.51
TP01	96:8:57.946621, 21:40:10.018921	87.51
TP02	96:8:59.945360, 21:40:3.279625	85.09

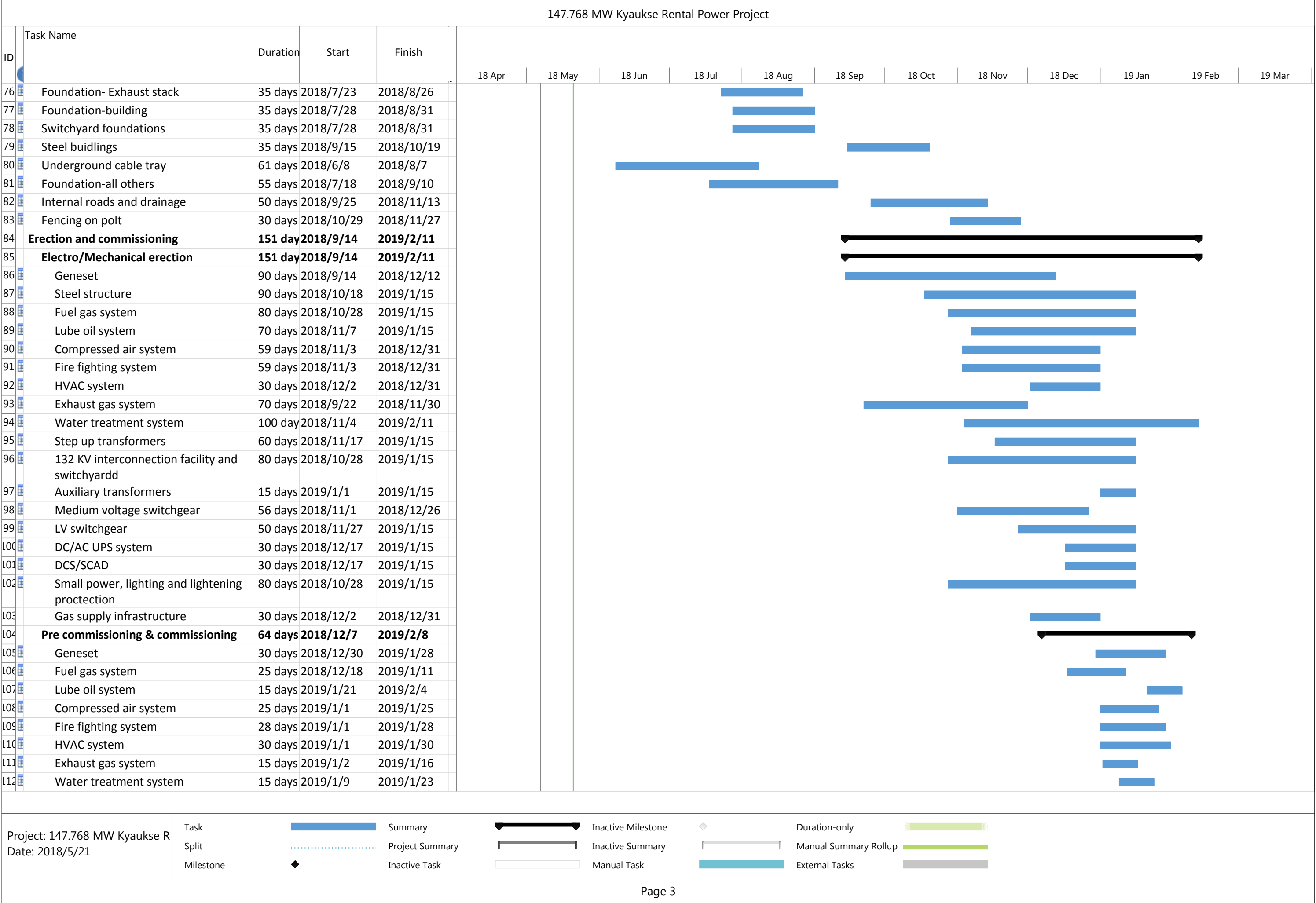
**Fence boundary outcomes (myanmar coordinate system)
adjusted fence range**

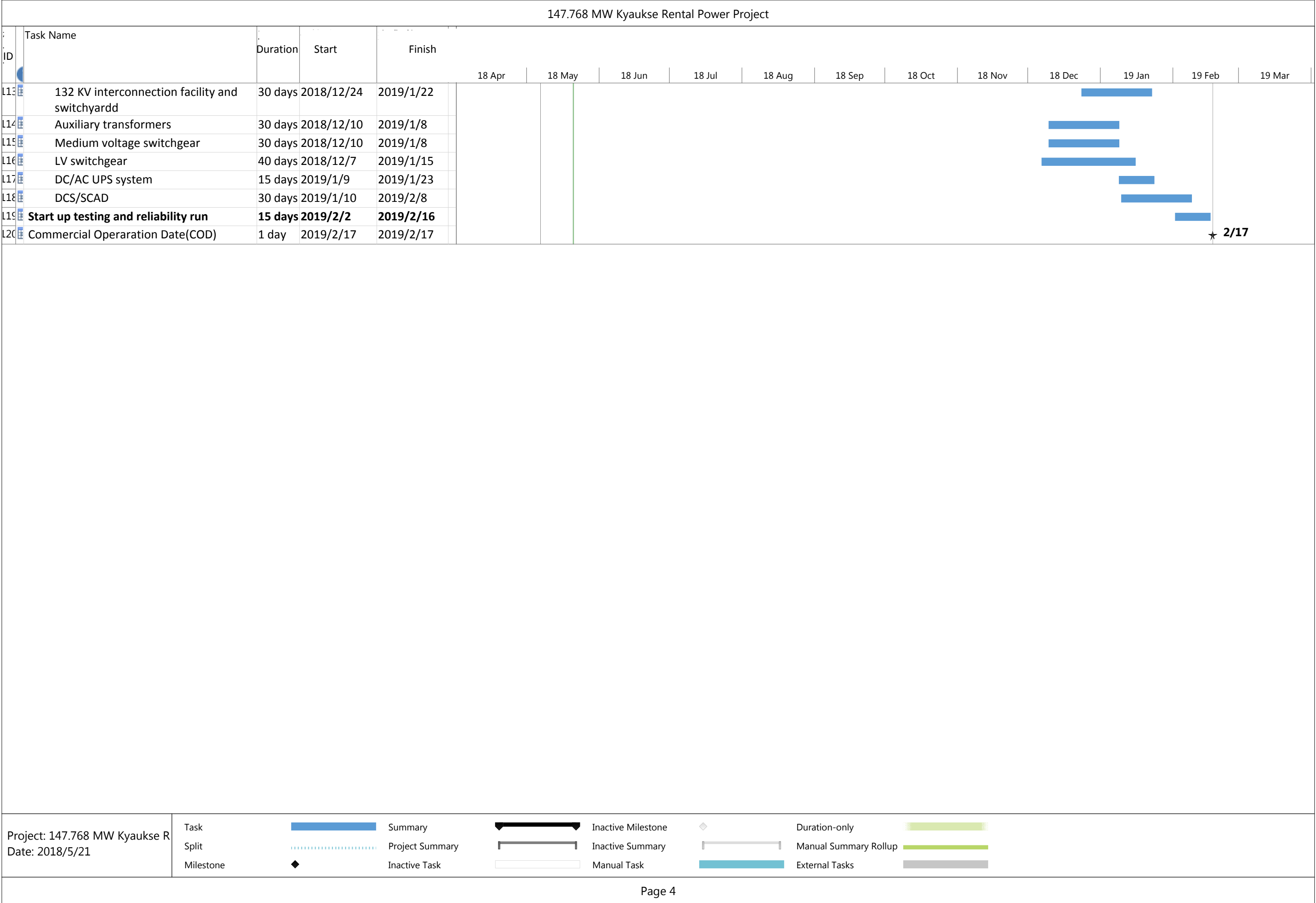
A'	206385.547	2398859.605	85.64
B'	205405.867	2398791.739	84.84
B-1'	205427.672	2398718.047	81.51
C'	206368.675	2398778.484	84.44
D'	206391.069	2398710.182	83.73
E'	205202.702	2398672.701	84.19
F'	205025.195	2398664.998	85.00
G'	205011.473	2398738.398	85.51
TP01	204995.661	2398951.748	87.51
TP02	205049.922	2398741.543	85.09



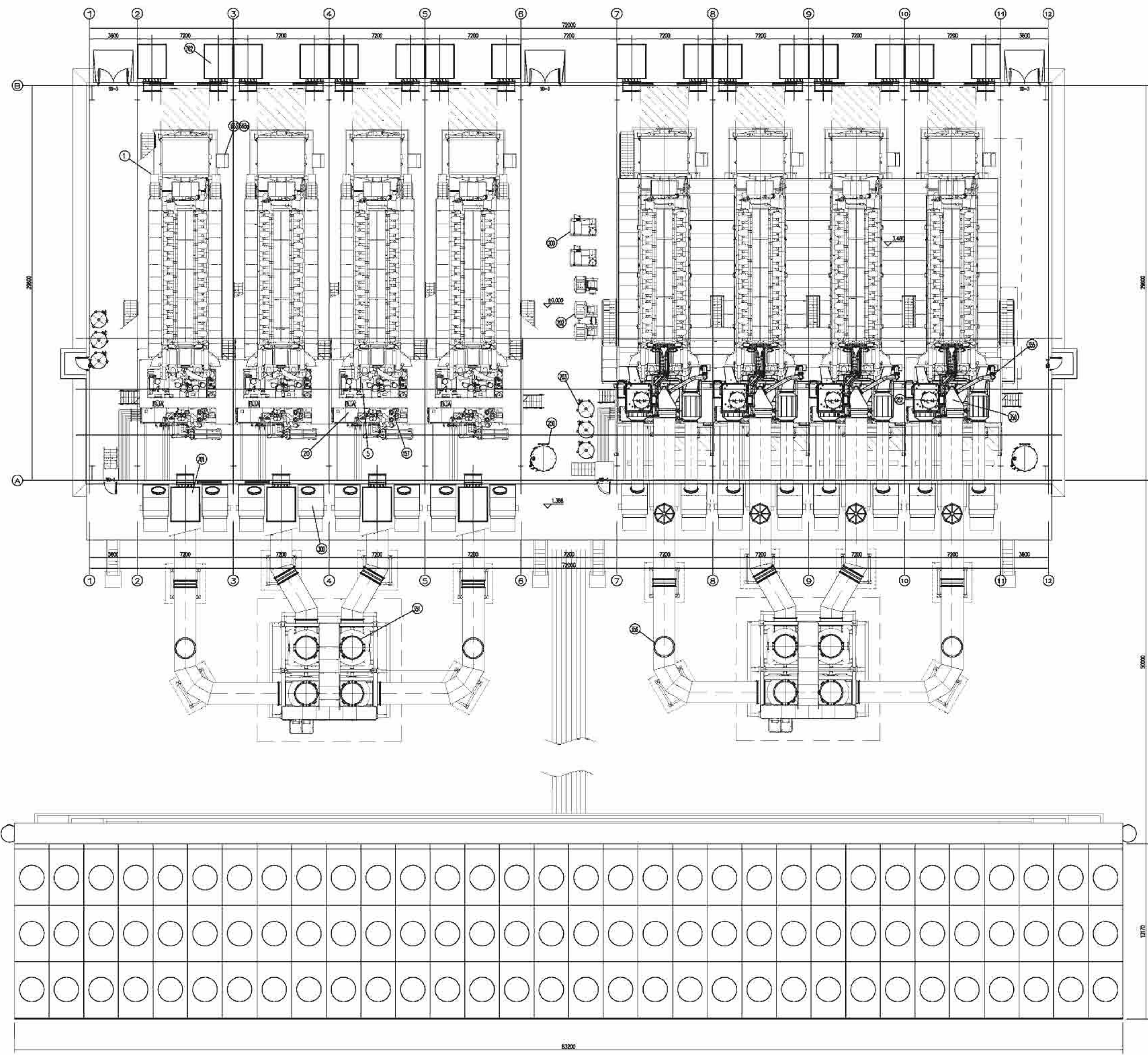






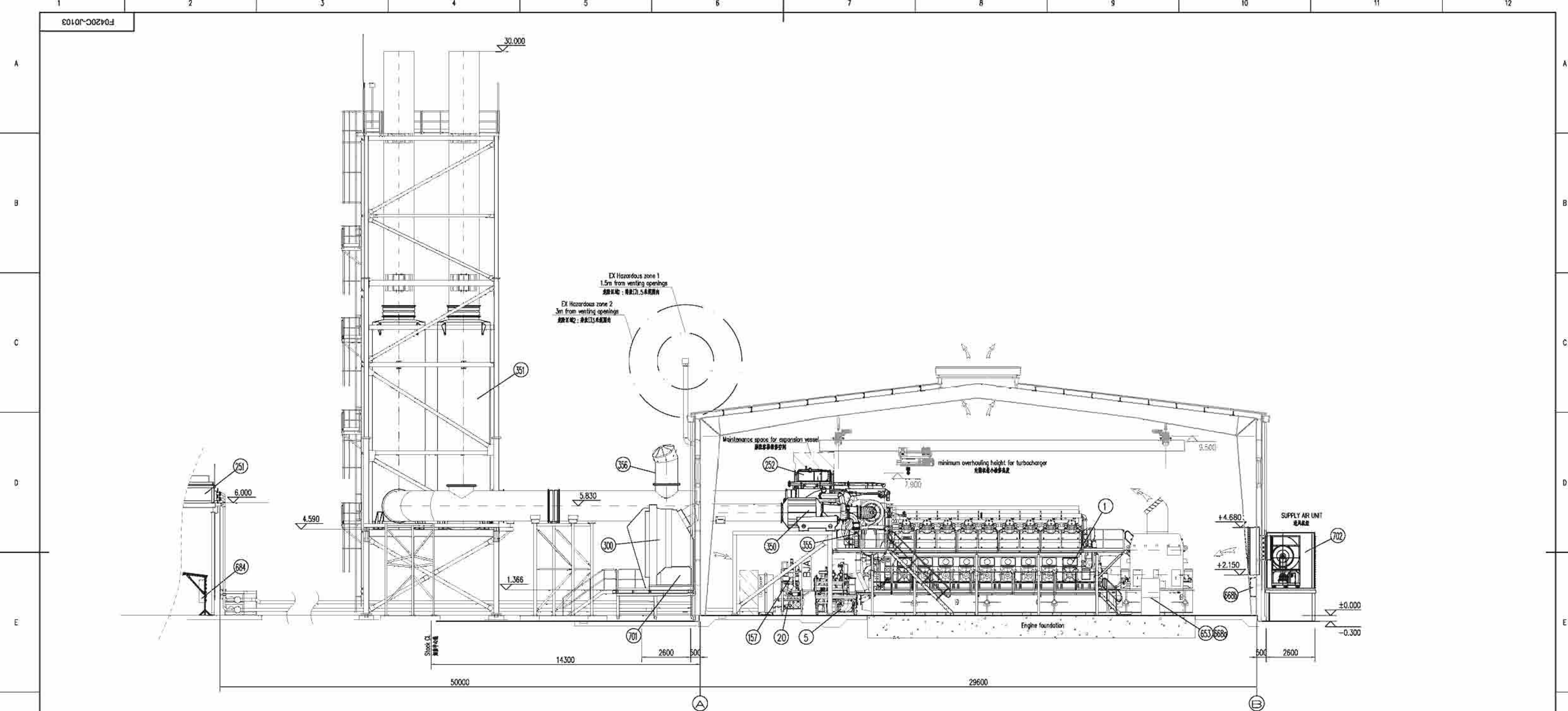


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ENGINE HALL (This list applies to Engine hall plan and Engine hall section layouts.)											
内燃机房 (此列表适用于内燃机房规划和布局)											
Item No.	Pcs.	Code	Description	Volume [m³]	Weight [kg]	Incl. liquids	Mounting level (Floor level)				
序号	数量	规格	描述	体积	重量		安装高度				
1	8	SQA	Engine generator set W18V50SG 内燃机发电机组 W18V50SG		~375000		+0.000				
5	8	MOD	Engine Auxiliary Module v 2.2, including W50SG Compact Gas Ramp 内燃机辅助模块 V 2.2		8886		+0.000				
20	8	MOD	W50SG pipe rack, v 2.2 W50SG 管架, V 2.2		3120		+0.000				
157	8	QBF	Oil mist separator unit 油雾分离单元		360		+1.335				
203	6	TSB	Starting air bottle 启动空气瓶	4.8	2023		+0.000				
250	2	VBA	Maintenance water tank 维护水箱	10	11800		+0.000				
252	8	VEA	Expansion vessel 膨胀罐	1.2	1450						
300	16	NGA	Intake air filter 进气滤清器		2510		+1.366				
350	8	NHA	Exhaust gas module 排气模块		8846		+4.570				
350	8	NHA	Exhaust gas module 排气模块		8846		+4.570				
355	8	NHA	Exhaust gas ventilation fan 排气通风机		278		+3.450				
701	8	EAA	Ventilation unit, aux. area - Cust. 通风装置, 辅助区域	18	2100		+1.336				
702	16	EAA	Ventilation unit, aux. engine hall - Cust. 通风装置, 辅助内燃机房	18	2600		-0.200				
200	1	TCA	Instrument and working air unit 仪表与工作风柜				+0.000				
202	2	TSA	Starting air unit (Double + Single) 启动空气单元 (双+单)				+0.000				
251	32	VCA	Low noise radiator 低噪声散热器		5200		+6.000				
351	8	NHA	Exhaust gas silencer 排气消声器		10150		+4.590				
356	12	-	Engine generator set W18V50SG 内燃机发电机组 W18V50SG		-		-				
653	8	BAN	Neutral point cubicle-Cust. 中性点柜				+0.000				
684	8		Radiator panels 散热器面板				+1.000				
668a	8	CFE	Local control panel 就地控制面板								
668b	8	CFE	Local control panel (Wall mounted) 就地控制面板 (壁挂式)								

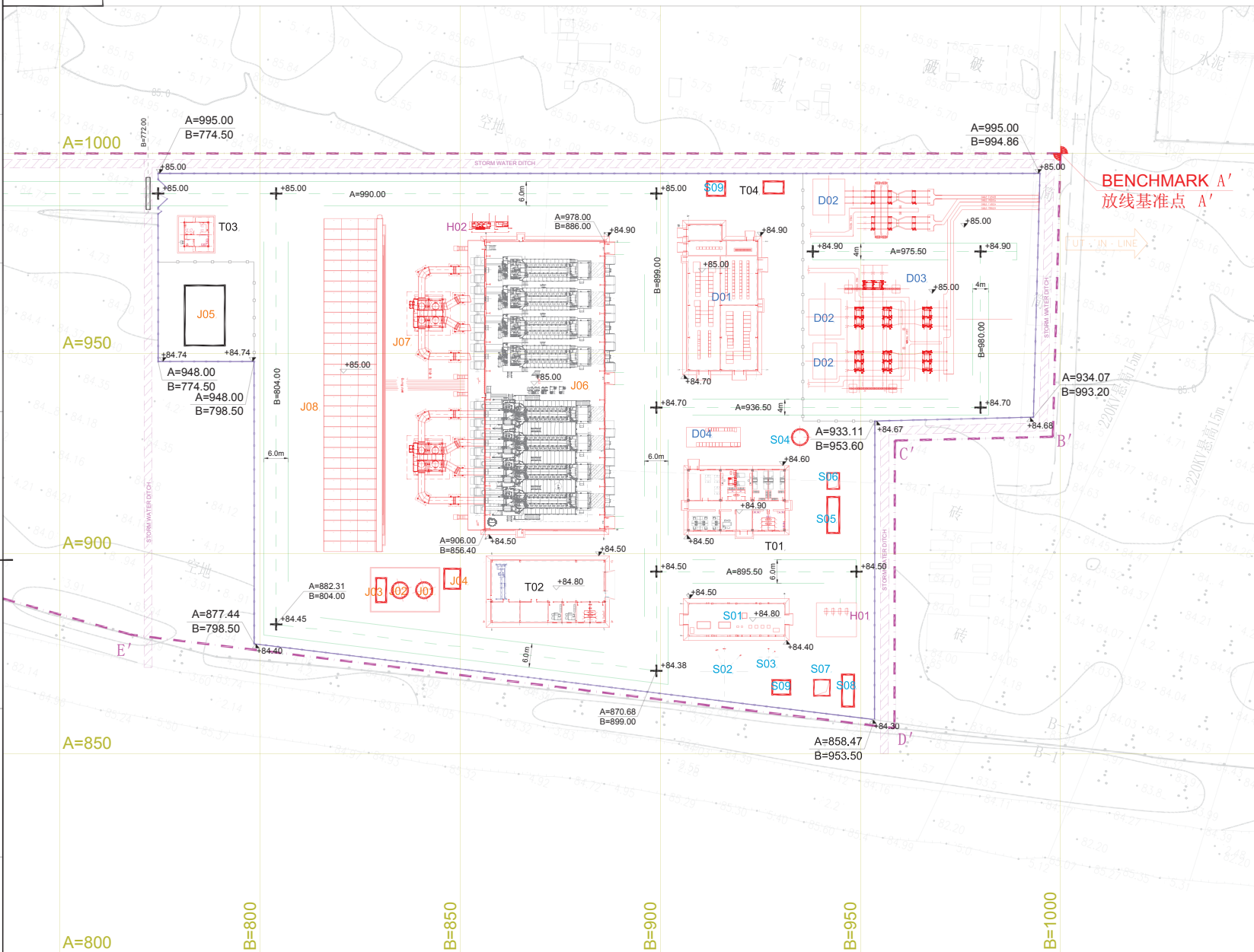
A		2018.7.25		For Information		何文通		丁瑞		刘伟成		李海	
REV.	DATE	DESCRIPTION				DESIGNED	CHECKED	REVIEWED	APPROVED				
OWNER / OWNER ENGINEER STAMP						EPC CONTRACTOR STAMP							
SIGNATURE						SIGNATURE							
EPC CONTRACTOR						SEPCOIII Electric Power Construction Co., Ltd. 山东电力建设第三工程有限公司							
DESIGNER						SEPCOIII Electric Power Construction Co., Ltd. Engineering Consulting Institute 山东电力建设第三工程有限公司工程咨询院							
PROJECT						145.49MW Rental Power Generation Plant in Kyaukse Region							
OWNER DOCUMENT NO.						DRAWING NAME:							
DOCUMENT NO.						LAYOUT PLAN DRAWING OF ENGINE HALL							
F0420C-J0102						主机房平面布置图							
SHEET 1 OF 1						SCALE:	DOCUMENT OWNER:	DESIGN PHASE:	REV.				
						1:150	SEPCOIII Engineering	Basic Design	A				



ENGINE HALL (This list applies to Engine hall plan and Engine hall section layouts.)							ENGINE HALL (This list applies to Engine hall plan and Engine hall section layouts.)						
内燃机房 (此列表适用于内燃机房规划和布局)							内燃机房 (此列表适用于内燃机房规划和布局)						
Item No. 序号	Pcs. 数量	Code 规格	Description 描述	Volume [m³] 体积	Weight [kg] Incl. liquids 重量	Mounting level (Floor level) 安装高度	Item No. 序号	Pcs. 数量	Code 规格	Description 描述	Volume [m³] 体积	Weight [kg] Incl. liquids 重量	Mounting level (Floor level) 安装高度
1	8	SQA	Engine generator set W18V50SG 内燃发电机组 W18V50SG		~375000	+0.000	350	8	NHA	Exhaust gas module 排气模块		8846	+4.570
5	8	MOD	Engine Auxiliary Module v 2.2, including W50SG Compact Gas Ramp 内燃机辅助模块 V 2.2		8886	+0.000	355	8	NHA	Exhaust gas ventilation fan 排气通风机		278	+3.450
20	8	MOD	W50SG pipe rack, v 2.2 W50SG 管架, V 2.2		3120	+0.000	701	8	EAA	Ventilation unit, aux. area - Cust. 通风装置, 辅助区域	18	2100	+1.336
157	8	QBF	Oil mist separator unit 油雾分离单元		360	+1.335	702	16	EAA	Ventilation unit, aux. engine hall - Cust. 通风装置, 辅助内燃机房	18	2600	-0.200
203	6	TSB	Starting air bottle 启动空气瓶	4.8	2023	+0.000	200	1	TCA	Instrument and working air unit 仪表与工作风缸			+0.000
250	2	VBA	Maintenance water tank 维护水箱	10	11800	+0.000	202	2	TSA	Starting air unit (Double + Single) 启动空气单元 (双+单)			+0.000
252	8	VEA	Expansion vessel 膨胀水箱	1.2	1450	+0.000	251	32	VCA	Low noise radiator 低噪声散热器		5200	+6.000
300	16	NGA	Intake air filter 进气滤清器		2510	+1.366	351	8	NHA	Exhaust gas silencer 排气消声器		10150	+4.590
350	8	NHA	Exhaust gas module 排气模块		8846	+4.570	356	12	-	Engine generator set W18V50SG 内燃发电机组 W18V50SG		-	-
653	8	BAN	Neutral point cubicle-Cust. 中性点柜			+0.000	668a	8	CFE	Local control panel 就地控制面板			
684	8	-	Radiator panels 散热器板			+1.000	668b	8	CFE	Local control panel (Wall mounted) 就地控制面板 (壁挂式)			

A	2018.7.25	For Information	何洪波	丁健	刘伟成	李继平	
REV.	DATE	DESCRIPTION	DESIGNED	CHECKED	REVIEWED	APPROVED	
OWNER / OWNER ENGINEER STAMP			EPC CONTRACTOR STAMP				
SIGNATURE			SIGNATURE				
EPC CONTRACTOR			SEPCOIII Electric Power Construction Co.,Ltd. 山东电力建设第三工程有限公司				
DESIGNER:			SEPCOIII Electric Power Construction Co.,Ltd. Engineering Consulting Institute 山东电力建设第三工程有限公司工程咨询院				
PROJECT:			145.49MW Rental Power Generation Plant in Kyaukse Region				
OWNER DOCUMENT NO.		DRAWING NAME:					
DOCUMENT NO.		CROSS SECTION DRAWING OF ENGINE HALL 主机房立面布置图					
F0420C-J0103		SCALE:	DOCUMENT OWNER:	DESIGN PHASE:	REV.		
SHEET 1 OF 1		1:100	SEPCOIII Engineering	Basic Design	A		

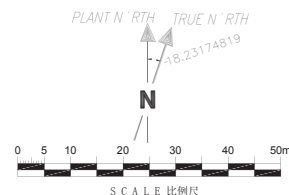
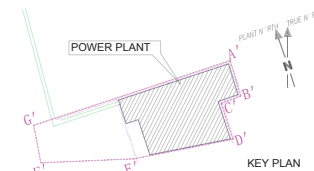
F0420C-20102-01



BUILDINGS AND STRUCTURES LIST

建、构筑物表

No. 编号	Description 名称	No. 编号	Description 名称	No. 编号	Description 名称	No. 编号	Description 名称
J01	CLEAN LUBE OIL TANK 净油箱	J07	STACK 烟囱	S03	PORTABLE WATER TANK 生活水箱	S09	WELL WATER PUMP SHED 深井泵棚
J02	LUBE OIL SERVICE TANK 润滑油箱	J08	RADIATOR 散热器	S04	EMERGENCY OIL PIT FOR TRANSFORMER 变压器事故油池	T01	SERVICE BUILDING 服务楼
J03	SLUDGE TANK 污泥箱	H01	DM WATER STORAGE SHELTER 除盐水箱棚	S05	SANITARY SEWAGE TREATMENT DEVICE 生活污水处理设备	T02	WORKSHOP AND WAREHOUSE 检修车间/材料库
J04	LUBE OIL PUMP SHELTER 润滑油泵棚	H02	SAMPLING AND CHEMICAL DOSING CONTAINER 取样加药集装箱	S06	SANITARY SEWAGE ADJUSTMENT POND 生活污水调节池	T03	GUARD HOUSE 门卫室
J05	FUEL TREATMENT STATION(OWNER'S SCOPE) 燃气处理站(业主范围)	S01	COMPREHENSIVE WATER PUMP HOUSE 综合水泵房	S07	OILY WASTEWATER COLLECTING POND 含油废水收集池	T04	MONITORING STATION (CONTAINER) 集装箱式监测站
J06	ENGINE HALL 主机房	S02	SERVICE/FIRE FIGHTING WATER TANK 工业消防水箱	S08	OILY WASTEWATER TREATMENT DEVICE 含油废水处理设备		

LAND PROPERTY CONTROL POINTS
征地边界控制点

MYANMAR COORDINATE SYSTEM 缅甸坐标系		
POINT	X(m)	Y(m)
A'	2398859.605	205385.547
B'	2398791.739	205405.867
C'	2398778.484	205368.675
D'	2398710.182	205391.069
E'	2398672.701	205202.702
F'	2398664.998	205025.195
G'	2398736.386	205011.473

LEGEND:

图例:

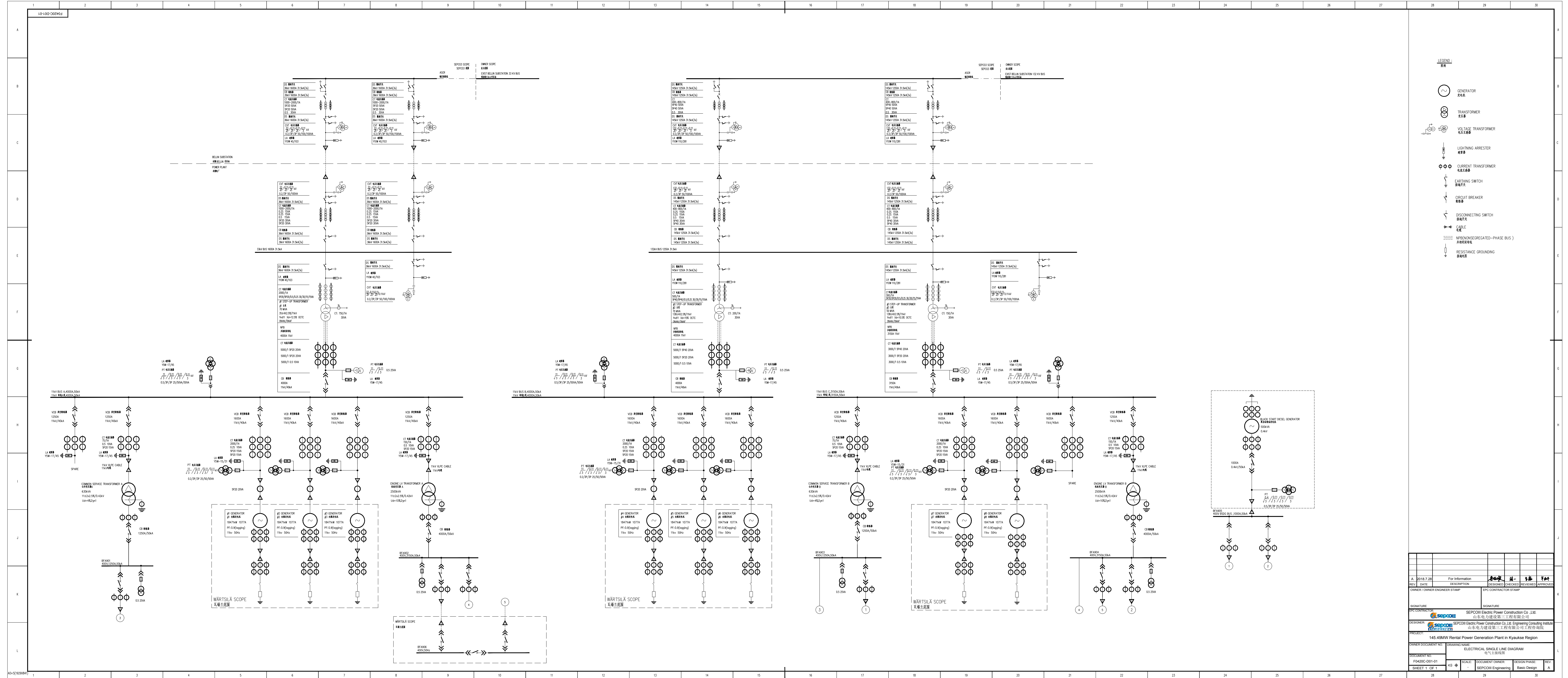
	BUILDINGS & STRUCTURES 新建建筑物		INTERNAL FENCE 厂内围墙
	ROAD 道路		BOUNDARY FENCE 厂区围墙
	LAND PROPERTY LINE 征地边界线		GROUND LEVEL 室外地坪标高
	FINISHED FLOOR LEVEL 室内地坪标高		

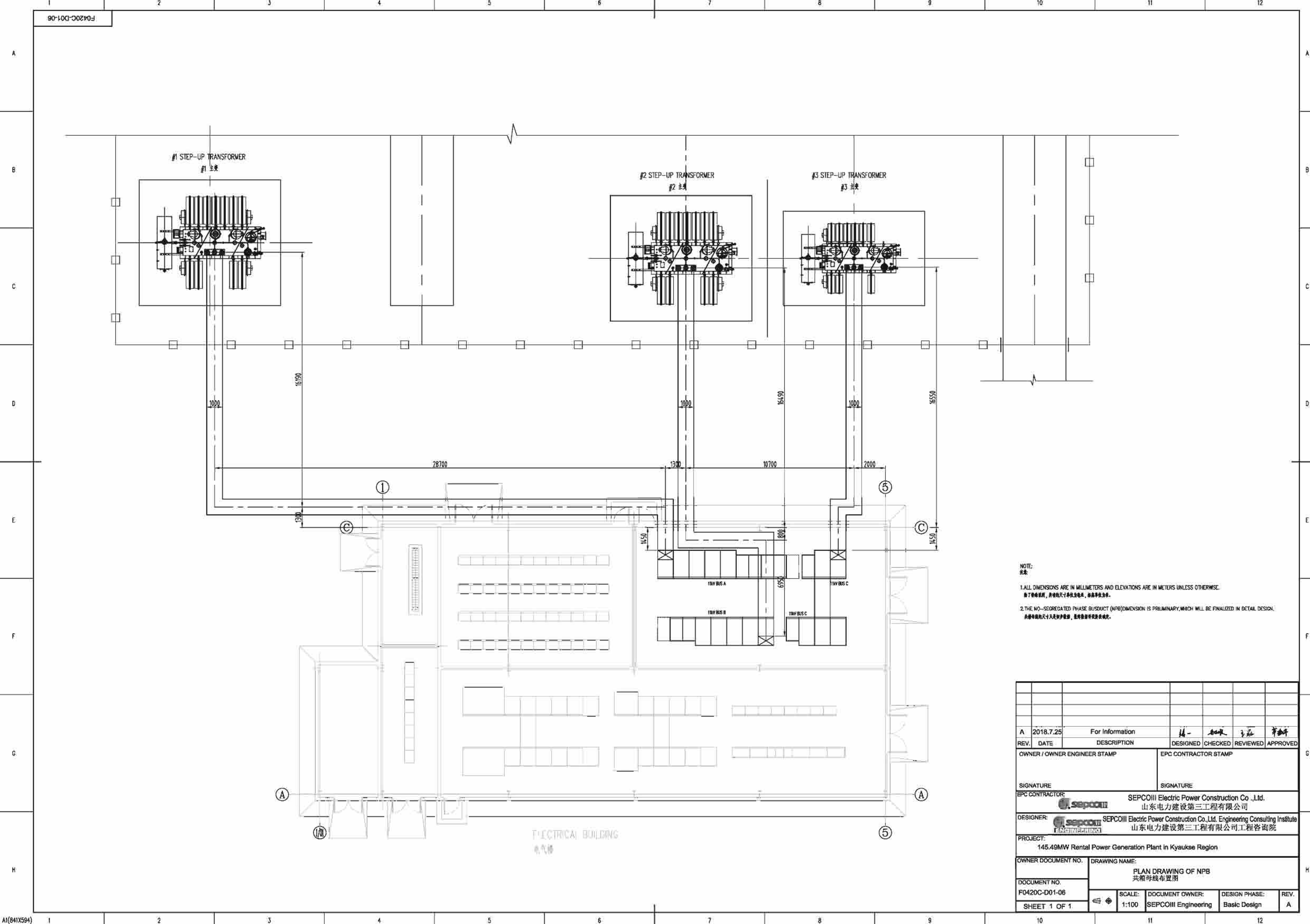
NOTES:

说明:

- THE COORDINATE SYSTEM IN DRAWING IS THE DESIGN COORDINATE SYSTEM.
图中坐标系采用设计坐标系。
- COORDINATE BENCHMARK "A'":
坐标放线基点 "A'":
A=1000.000, B=1000.000;
X=2398859.605, Y=205385.547 (Myanmar Coordinate System 缅甸坐标系).
COORDINATE CONVERSION:
坐标转换公式:
(1): $X = A \cos \alpha + B \sin \alpha + 2397596.945$
 $Y = B \cos \alpha + A \sin \alpha + 204748.609$
(2): $A = X \cos \alpha + Y \sin \alpha - 2213176.883$
 $B = Y \cos \alpha - X \sin \alpha - 944585.192$
(3): $\alpha = -18.23174819^\circ$
- THE ELEVATION SYSTEM IN DRAWING IS THE M.S.L ELEVATION SYSTEM.
图中高程系统采用M.S.L高程系统。
- ALL DIMENSIONS AND COORDINATES, ELEVATIONS ARE IN METERS
UNLESS OTHERWISE INDICATED.
图中所有尺寸、坐标和高程均以米计, 除有其他说明。

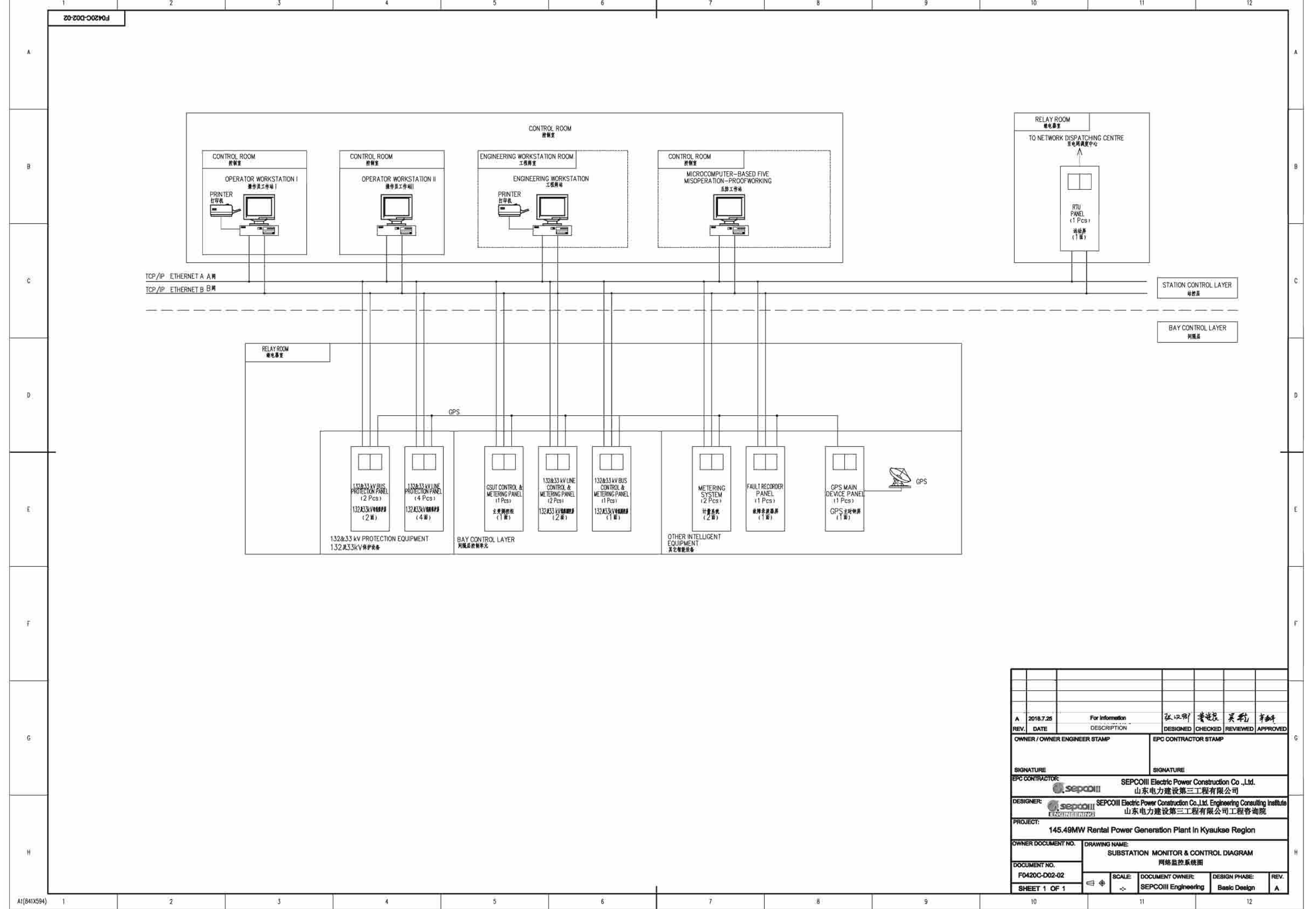
A 2018.7.24 For Approval		设计	审核	审批	制图
REV.	DATE	DESCRIPTION	DESIGNED	CHECKED	REVIEWED
OWNER / OWNER ENGINEER STAMP			EPC CONTRACTOR STAMP		
SIGNATURE			SIGNATURE		
EPC CONTRACTOR: SEPCOIII Electric Power Construction Co., Ltd. 山东电力建设第三工程有限公司			DESIGNER: SEPCOIII Electric Power Construction Co., Ltd. Engineering Consulting Institute 山东电力建设第三工程有限公司工程咨询院		
PROJECT: 145.49MW Rental Power Generation Plant in Kyaukse Region			DRAWING NAME: PLANT GENERAL LAYOUT 厂区总平面布置图		
DOCUMENT NO. F0420C-20102-01		SCALE: 1:500	DOCUMENT OWNER: SEPCO III Engineering	DESIGN PHASE: Basic Design	REV. A
SHEET 01 OF 01					

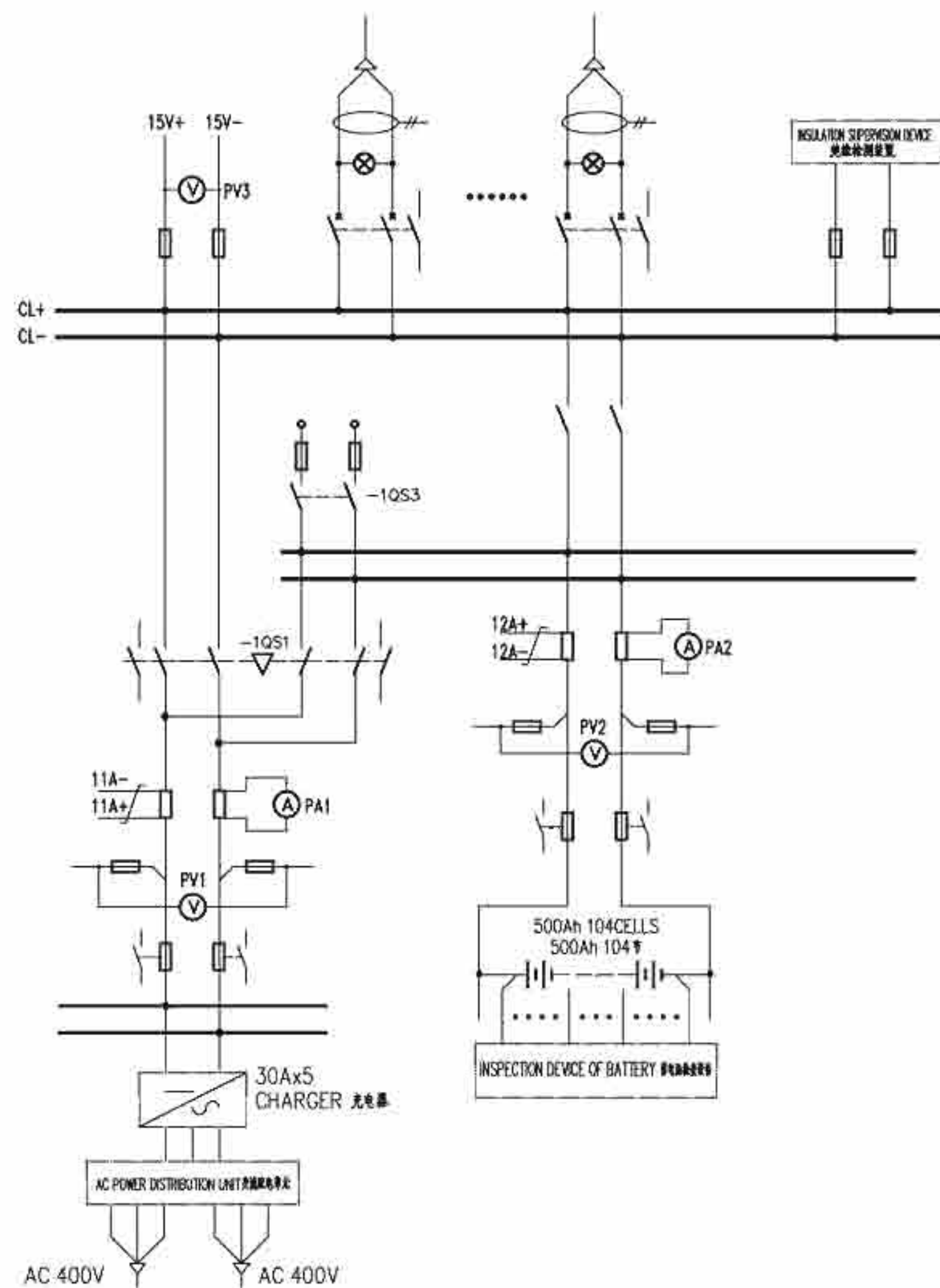




NOTE:
说明:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
除了特殊说明, 所有尺寸单位为毫米, 标高单位为米。
2. THE NON-SEGREGATED PHASE BUSDUCT (NPB) DIMENSION IS PRELIMINARY, WHICH WILL BE FINALIZED IN DETAIL DESIGN.
共箱母线尺寸为初步数据, 最终数据将在详图阶段确定。

A	2018.7.25	For Information	设计	审核	校对	签字	
REV.	DATE	DESCRIPTION	DESIGNED	CHECKED	REVIEWED	APPROVED	
OWNER / OWNER ENGINEER STAMP			EPC CONTRACTOR STAMP				
SIGNATURE			SIGNATURE				
EPC CONTRACTOR:		SEPCOIII Electric Power Construction Co.,Ltd. 山东电力建设第三工程有限公司					
DESIGNER:		SEPCOIII Electric Power Construction Co.,Ltd. Engineering Consulting Institute 山东电力建设第三工程有限公司工程咨询院					
PROJECT: 145.49MW Rental Power Generation Plant in Kyaukse Region							
OWNER DOCUMENT NO.		DRAWING NAME: PLAN DRAWING OF NPB 共箱母线布置图					
DOCUMENT NO. F0420C-D01-06		SCALE: 1:100	DOCUMENT OWNER: SEPCOIII Engineering		DESIGN PHASE: Basic Design		REV. A
SHEET 1 OF 1							

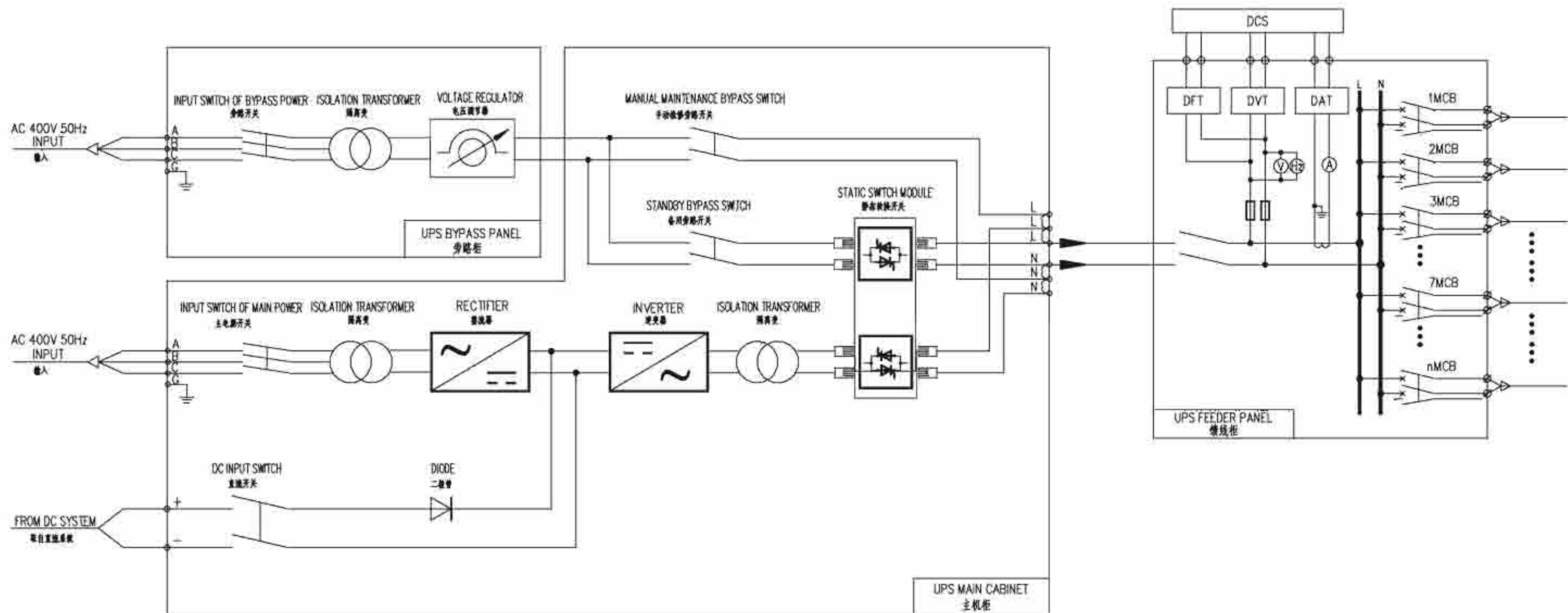




NOTE: THIS DIAGRAM IS ONLY FOR REFERENCE, SPECIFIC EQUIPMENT PARAMETERS WILL BE DECIDED IN THE ENGINEERING STAGE.
注: 此图仅供参考, 具体设备参数将在工程阶段确定。

A	2018.7.25	For information	张汉卿	曹进良	吴利	李新	
REV.	DATE	DESCRIPTION	DESIGNED	CHECKED	REVIEWED	APPROVED	
OWNER / OWNER ENGINEER STAMP			EPC CONTRACTOR STAMP				
SIGNATURE			SIGNATURE				
EPC CONTRACTOR:			SEPCOIII Electric Power Construction Co., Ltd. 山东电力建设第三工程有限公司				
DESIGNER:			SEPCOIII Electric Power Construction Co., Ltd. Engineering Consulting Institute 山东电力建设第三工程有限公司工程咨询院				
PROJECT:			145.49MW Rental Power Generation Plant in Kyaukse Region				
OWNER DOCUMENT NO.			DRAWING NAME:				
DOCUMENT NO.			DC SYSTEM DIAGRAM 直流系统图				
F0420C-D02-03			SCALE:	DOCUMENT OWNER:	DESIGN PHASE:	REV.	
SHEET 1 OF 1				SEPCOIII Engineering	Basic Design	A	

F0420C-D02-04

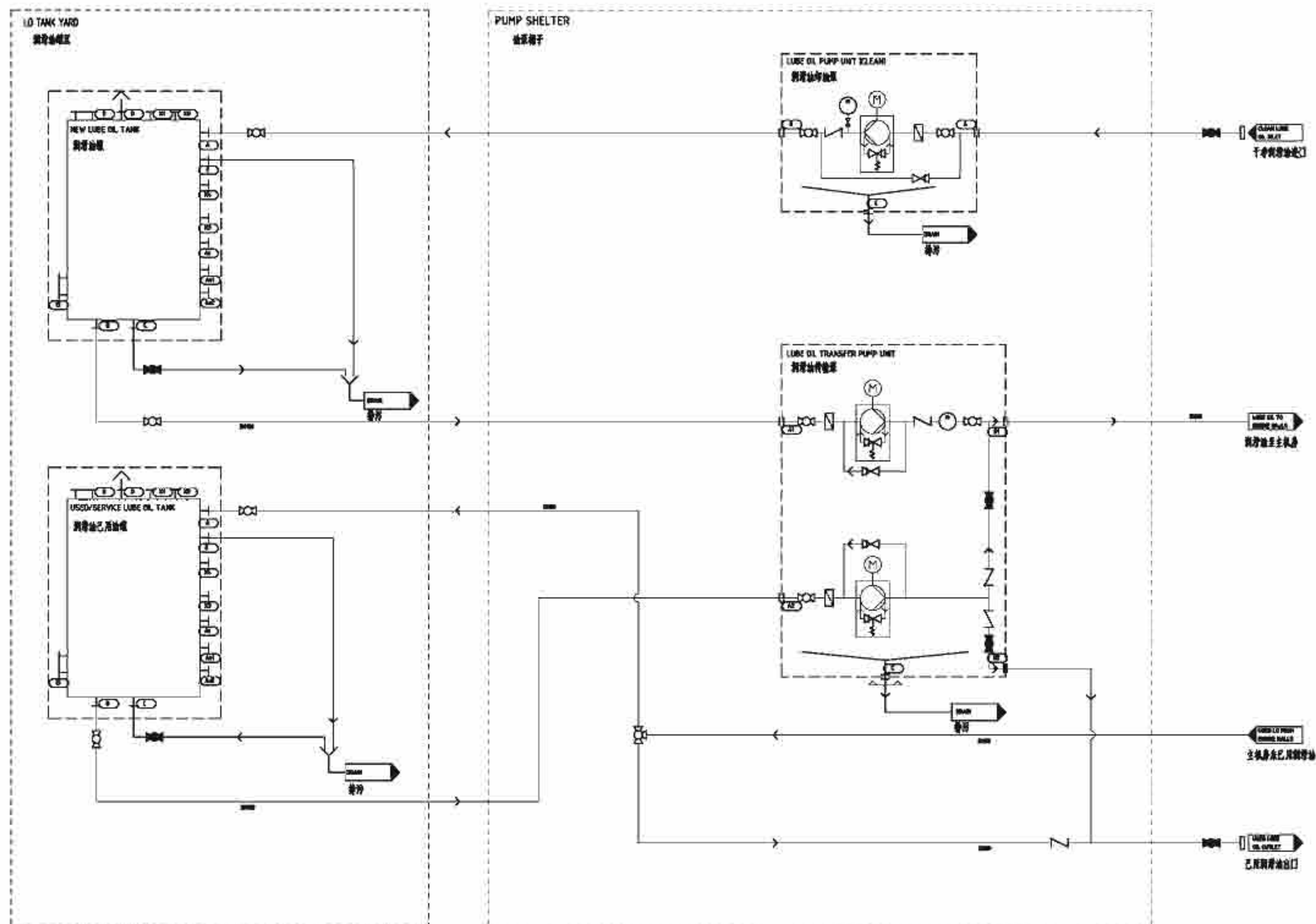


UPS CAPACITY WILL BE 25kVA.

LEGEND
图例

V	VOLTAGE METER 电压表	DVT	VOLTAGE TRANSDUCER 电压互感器
A	CURRENT METER 电流表	DAT	CURRENT TRANSDUCER 电流互感器
F	FREQUENCY METER 频率计	DFT	FREQUENCY TRANSDUCER 频率互感器

A	2018.7.25	For information	张汉卿	曹进良	吴利	李新
REV.	DATE	DESCRIPTION	DESIGNED	CHECKED	REVIEWED	APPROVED
OWNER / OWNER ENGINEER STAMP			EPC CONTRACTOR STAMP			
SIGNATURE			SIGNATURE			
EPC CONTRACTOR:			SEPCOIII Electric Power Construction Co., Ltd. 山东电力建设第三工程有限公司			
DESIGNER:			SEPCOIII Electric Power Construction Co., Ltd. Engineering Consulting Institute 山东电力建设第三工程有限公司工程咨询院			
PROJECT:			145.49MW Rental Power Generation Plant in Kyaukse Region			
OWNER DOCUMENT NO.		DRAWING NAME:				
DOCUMENT NO.		UPS SYSTEM DIAGRAM UPS系统图				
F0420C-D02-04		SCALE:		DOCUMENT OWNER:	DESIGN PHASE:	REV.
SHEET 1 OF 1		1:1		SEPCOIII Engineering	Basic Design	A



A	2018.7.25	For Information	设计	审核	制图	签字	
REV.	DATE	DESCRIPTION	DESIGNED	CHECKED	REVIEWED	APPROVED	
OWNER / OWNER ENGINEER STAMP			EPC CONTRACTOR STAMP				
SIGNATURE			SIGNATURE				
EPC CONTRACTOR:			SEPCOIII Electric Power Construction Co.,Ltd. 山东电力建设第三工程有限公司				
DESIGNER:			SEPCOIII Electric Power Construction Co.,Ltd. Engineering Consulting Institute 山东电力建设第三工程有限公司工程咨询院				
PROJECT:			145.49MW Rental Power Generation Plant in Kyaukse Region				
OWNER DOCUMENT NO:		DRAWING NAME:					
		LUBE OIL SYSTEM FLOW DIAGRAM 润滑油系统流程图					
DOCUMENT NO.		SCALE:		DOCUMENT OWNER:		DESIGN PHASE:	
F0420C-J0104		1:1		SEPCOIII Engineering		Basic Design	
SHEET 1 OF 2						REV.	
						A	

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F0420C-J0105

A

B

C

D

E

F

A

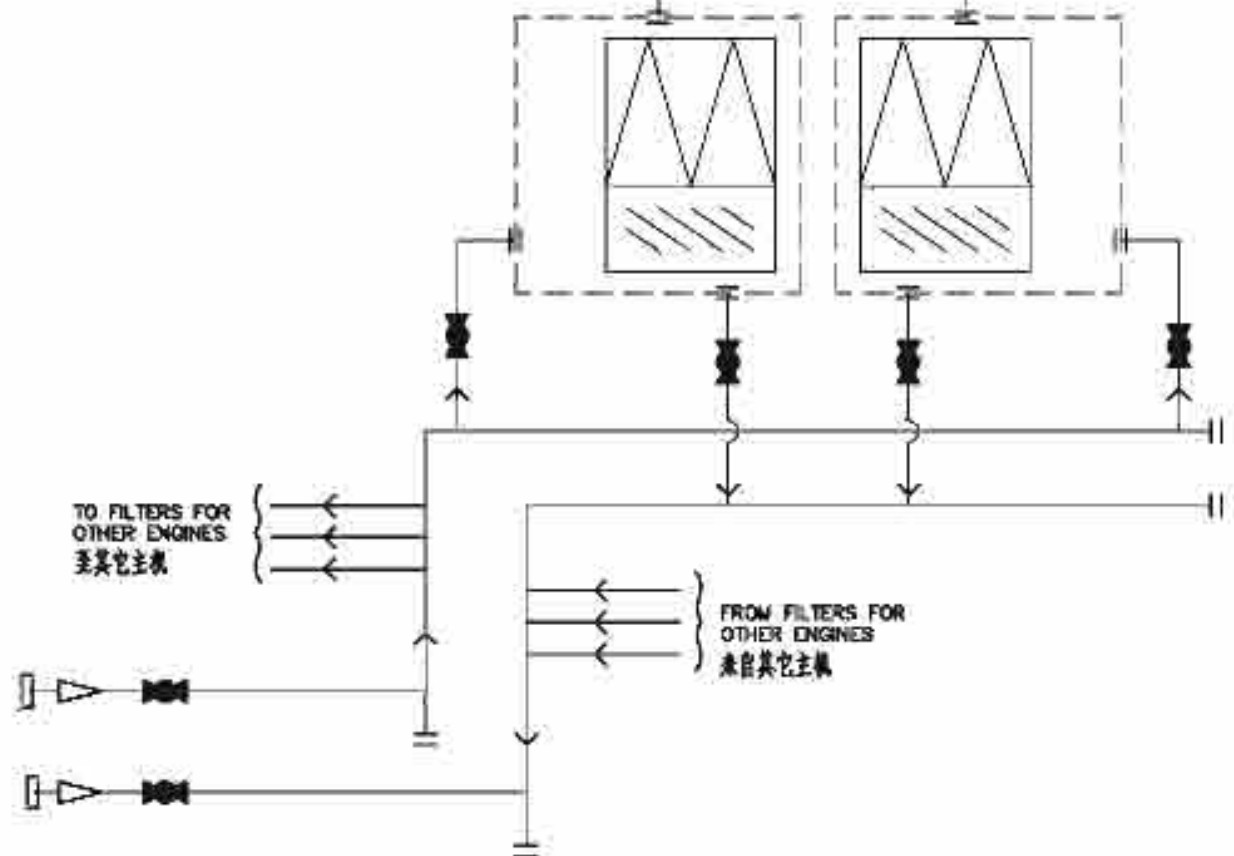
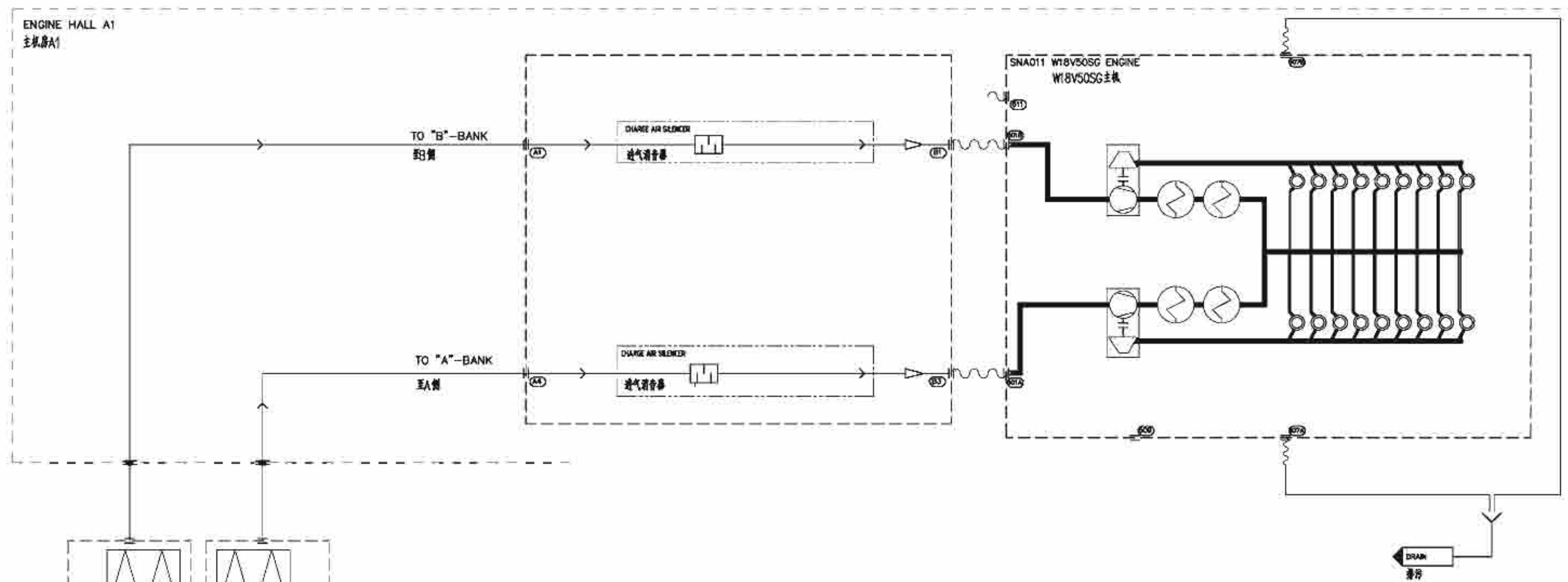
B

C

D

E

F

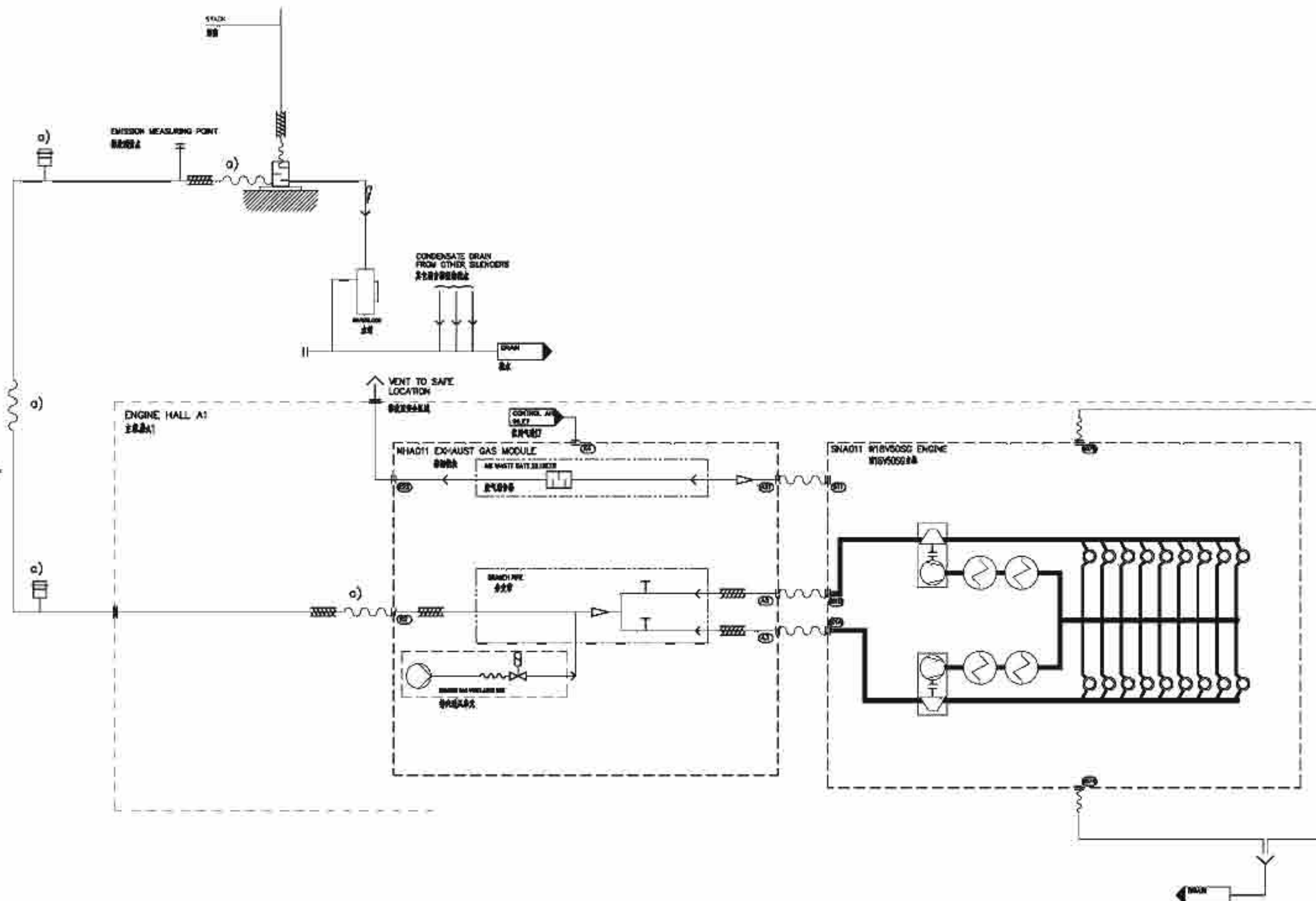


A	2018.7.25	For information	设计	审核	刘伟成	李金平	
REV.	DATE	DESCRIPTION	DESIGNED	CHECKED	REVIEWED	APPROVED	
OWNER / OWNER ENGINEER STAMP			EPC CONTRACTOR STAMP				
SIGNATURE			SIGNATURE				
EPC CONTRACTOR:			SEPCOIII Electric Power Construction Co.,Ltd. 山东电力建设第三工程有限公司				
DESIGNER:			SEPCOIII Electric Power Construction Co.,Ltd. Engineering Consulting Institute 山东电力建设第三工程有限公司工程咨询院				
PROJECT:			145.49MW Rental Power Generation Plant in Kyaukse Region				
OWNER DOCUMENT NO.		DRAWING NAME:					
DOCUMENT NO.		AIR INTAKE SYSTEM FLOW DIAGRAM 进气系统流程图					
F0420C-J0105							
SHEET 1 OF 1		≡	SCALE:	DOCUMENT OWNER:	DESIGN PHASE:	REV.	
		1:1	SEPCOIII Engineering	Basic Design	A		

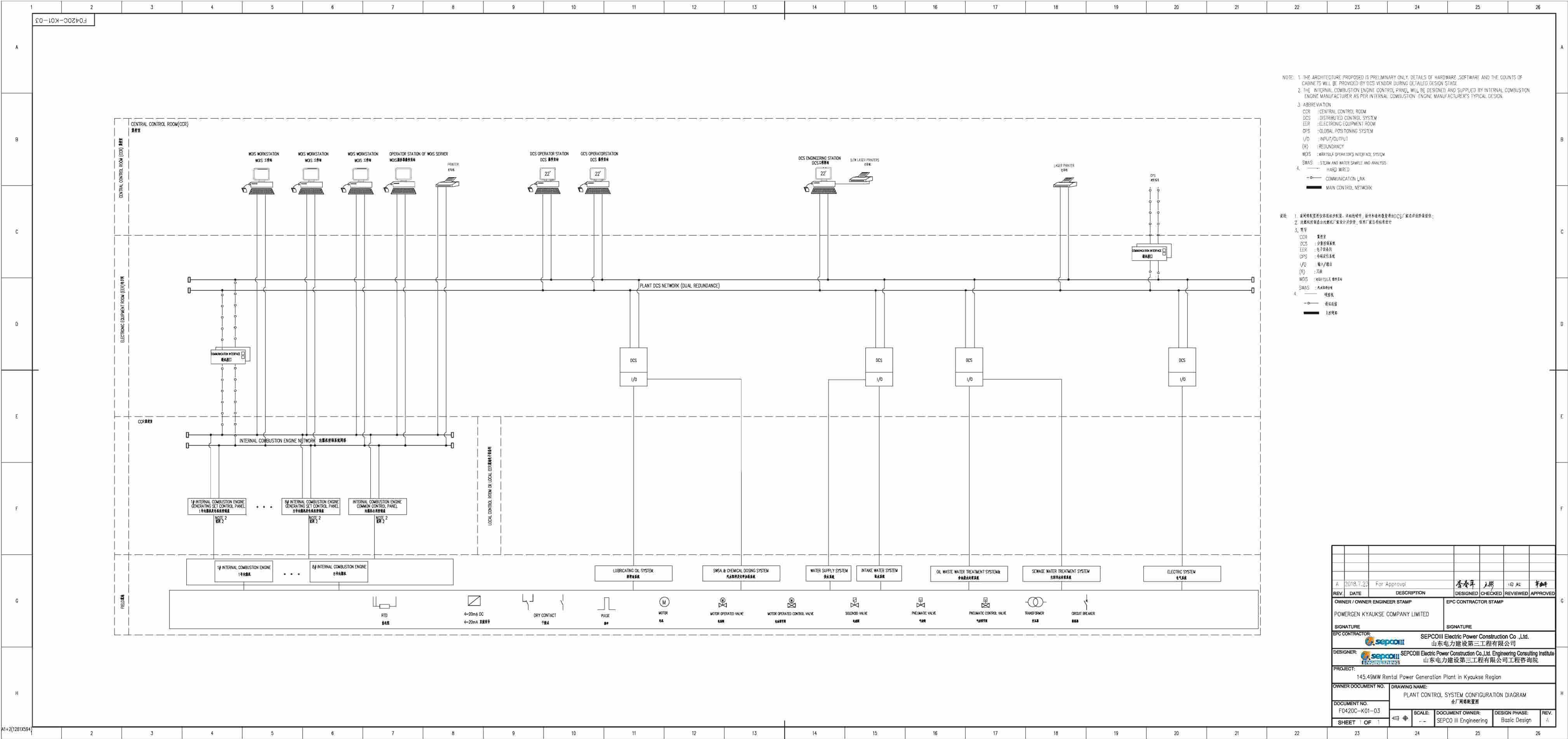
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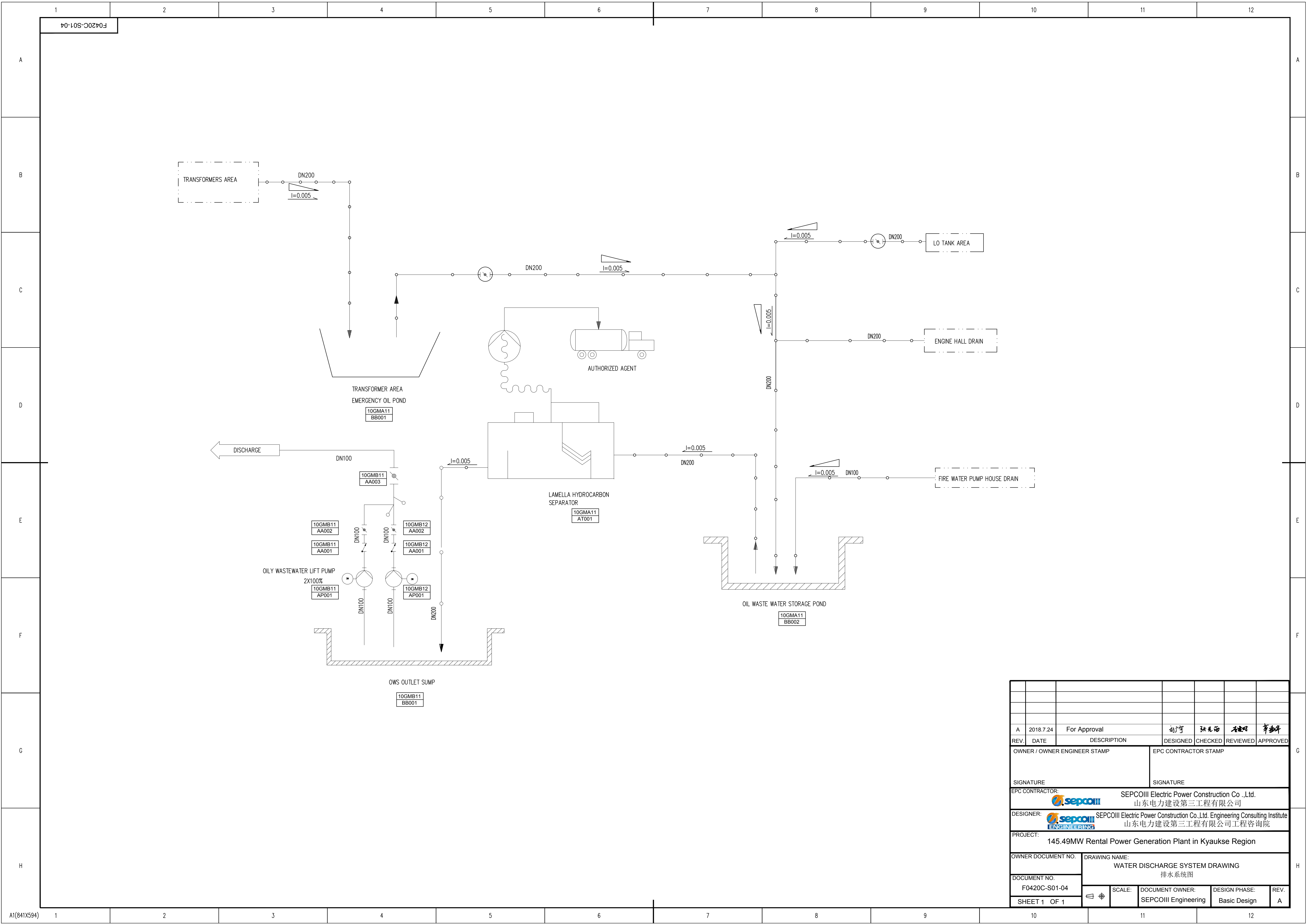
F0420C-J0106


- a) Amount, type and location of exhaust gas bellows to be defined during plant engineering phase.
a) 烟气膨胀节的数量、形式以及定位详设阶段确定。
b) Rupture discs amount and location to be defined during plant engineering phase.
b) 防爆片的数量以及定位详设阶段确定。



A	2018.7.25	For Information	设计	审核	刘伟成	李金平	
REV.	DATE	DESCRIPTION	DESIGNED	CHECKED	REVIEWED	APPROVED	
OWNER / OWNER ENGINEER STAMP			EPC CONTRACTOR STAMP				
SIGNATURE			SIGNATURE				
EPC CONTRACTOR:			SEPCOIII Electric Power Construction Co.,Ltd. 山东电力建设第三工程有限公司				
DESIGNER:			SEPCOIII Electric Power Construction Co.,Ltd. Engineering Consulting Institute 山东电力建设第三工程有限公司工程咨询院				
PROJECT:			145.49MW Rental Power Generation Plant in Kyaukse Region				
OWNER DOCUMENT NO.		DRAWING NAME:					
		ENGINE EXHAUST SYSTEM FLOW DIAGRAM 排烟系统流程图					
DOCUMENT NO.		SCALE:	DOCUMENT OWNER:	DESIGN PHASE:	REV.		
F0420C-J0106							
SHEET 1 OF 1		1:1	SEPCOIII Engineering	Basic Design	A		





A	2018.7.24	For Approval	刘宁	张先西	李健	李健	
REV.	DATE	DESCRIPTION	DESIGNED	CHECKED	REVIEWED	APPROVED	
OWNER / OWNER ENGINEER STAMP			EPC CONTRACTOR STAMP				
SIGNATURE			SIGNATURE				
EPC CONTRACTOR:			SEPCOIII Electric Power Construction Co.,Ltd. 山东电力建设第三工程有限公司				
DESIGNER:			SEPCOIII Electric Power Construction Co.,Ltd. Engineering Consulting Institute 山东电力建设第三工程有限公司工程咨询院				
PROJECT:			145.49MW Rental Power Generation Plant in Kyaukse Region				
OWNER DOCUMENT NO.			DRAWING NAME:				
DOCUMENT NO.			WATER DISCHARGE SYSTEM DRAWING 排水系统图				
F0420C-S01-04				SCALE:	DOCUMENT OWNER:	DESIGN PHASE:	REV.
SHEET 1 OF 1					SEPCOIII Engineering	Basic Design	A

ဝိတ်အားဝယ်ယူရေး သဘောတူညီချက်စာချုပ်
(မူကြမ်း)

THE GOVERNMENT OF THE REPUBLIC OF THE UNION OF THE MYANMAR
MINISTRY OF ELECTRICITY AND ENERGY
ELECTRIC POWER GENERATION ENTERPRISE

LETTER OF ACCEPTANCE

This Letter of Acceptance (this "LOA") is issued on May ^{7th} ~~5th~~, 2018 ("Commencement Date") in Naypyidaw, Myanmar, by **Electric Power Generation Enterprise**, Ministry of Electricity and Energy, Building No. 27, Naypyitaw, ("EPGE") represented by the Managing Director, Mr. Khin Maung Win to the Consortium of National Infrastructure Holdings Company Limited, Tellhow International Engineering & Contracting Company Limited, Myanmar Chemical & Machinery Company Limited and SEPCOIII Electric Power Construction Company Limited represented National Infrastructure Holdings Company (NIHC) with registered address at No. 36, Theinphyu Road, Pazundaung Township, Yangon, Myanmar the ("NIHC Consortium") represented by Mr. Maung Kyay (Managing Director, NIHC).

EPGE and the NIHC Consortium shall each be referred to as a "Party", and collectively the "Parties".

1. The Government of the Republic of the Union of Myanmar laid down the policy to meet the demand for electric power in the country and to fulfill this demand for electric power in the Regions/States, the Ministry of Electricity and Energy ("MOEE") published in the local newspaper an open invitation to all foreign and local investors to submit a proposal in response to the SRFP issued by EPGE on January 6, 2018 including amendments thereof, for the purchasing of electricity on Rental basis in kyaukse Region, ("Invitation");
2. In response to the Invitation, MOEE received various proposals including the commercial offer from the companies ("Tender Response"), and after evaluating the said proposals, MOEE has determined to award the NIHC Consortium as the successful tenderer; and
3. The Parties intend to enter into this LOA to confirm their mutual understandings prior to entering into a definitive Agreement for the Power Purchase Agreement for the hire of gas engines in accordance with the terms hereof.
4. The NIHC Consortium intends to incorporate a project company, with the members of the consortium as mentioned above in the project company, for the purpose of signing the definitive Agreement with EPGE.

Terms and Conditions

EPGE intends to purchase electricity from the NIHC consortium and the NIHC consortium intends to sell the electricity (145.49MW) to EPGE, subject to the terms and conditions substantially agreed and provided in the Form of Agreement ("Form of Agreement") attached hereto as Attachment 1, and containing the fundamental terms and conditions summarized below.

Words and expressions defined in the Form of Agreement shall have the same meaning when used herein, unless otherwise defined herein.

Project	Purchasing of electricity (145.49 MW) on Rental basis in Kyaukse Region
Agreement Term	60 months starting from Commercial Operation Date, subject to term extensions by agreement of both Parties and provision of three (3) months' advance notice by EPGE to the NIHC Consortium.
Implementation of the project	The NIHC Consortium shall commence construction, mobilization and shipment of equipment on the Commencement Date.
Commercial Operation Date	Commercial Operation Date shall occur within 286 days from the Commencement Date or otherwise (subject to extensions due to Excusable Delays)
Approvals and Licenses	The NIHC Consortium shall timely obtain and maintain throughout the term all permits, approvals and licenses required under Myanmar laws and regulations for the Parties to perform their respective obligations in relation to the Projects
Site Delivery and Access	EPGE shall ensure the availability of the Site at the Commencement Date and the Ancillary Land.
Fuel Availability	EPGE shall be responsible to arrange natural gas 30 MMCFD from SHWE Gas for running the power plant to its Net Guaranteed Output
Net Guaranteed Output and Net Guaranteed Heat Rate and Take or Pay	Net Guaranteed Output shall be 145.49 MW and Net Guaranteed Heat Rate shall be 8253.80 Btu/kWh at any site condition based on higher heating value. Annual Take or Pay shall be made minimum 80% availability of the power plant.
Payments	All applicable energy payment shall be paid by EPGE to the NIHC Consortium in Myanmar Kyats.
Delivery Point	EPGE shall provide permission for connection to Bellin Substation.
Ownership of Power Plant	The Power Plant, associated infrastructure and related equipment procured and owned by the NIHC Consortium shall remain the property of NIHC Consortium
Tariff	31.7949 USD/MWh inclusive of 2.5% withholding tax and custom duty. 5% Commercial tax shall be paid separately.

Each Party, acting in good faith, shall cooperate with relevant authorities and obtain all necessary approvals to approve the terms of the Form of Agreement so as to enable it to enter into full effect (90) days from the Commencement Date. If the form of agreement needs to make the revision upon comments of any governmental authority, the Parties will meet and discuss in good faith a fair compromise. Prior to the execution of the Agreement for the 145.49 MW Power Plant each Party shall co-operate with the relevant authorities to do all things that will be reasonably necessary for the implementation of the Project. The duly authorized representatives of each of the Parties have signed this LOA at the place and on the date written above.

LOA is issued by:

Electric Power Generation Enterprise



7. 5. 2018.

Khin Maung Win

Managing Director

Electric Power Generation Enterprise

LOA is accepted by:

National Infrastructure Holdings Company
(NIHC)



Maung Kyay

Managing Director

National Infrastructure Holdings Company
(NIHC)

MINISTRY OF ELECTRICITY AND ENERGY

POWER PURCHASE AGREEMENT

BETWEEN

ELECTRIC POWER GENERATION ENTERPRISE

AND

POWERGEN KYAUKSE COMPANY LIMITED

FOR

145.49 MW GAS ENGINES POWER PLANT

AT

KYAUKSE DISTRICT, MANDALAY REGION

NAY PYI TAW

[Date]

Handwritten signature and initials in the bottom left corner.

Power Purchase Agreement for 145.49 MW gas engine power plant at Kyaukse District, Mandalay Region.

1. Preamble.

This Power Purchase Agreement for 145.49 MW Gas Engines Power Plant at Kyaukse District, Mandalay Region (hereinafter referred to as the "Agreement") is made on [●] 2018 between Electric Power Generation Enterprise, Ministry of Electricity and Energy, Building No.27, Naypyitaw, (hereinafter referred to as "EPGE" which expression includes its successors and legal representatives) represented by U Khin Maung Win, Managing Director on the one part; and

PowerGen Kyaukse Company Limited, with registered address at 36, Theinphyu Road, Pazundaung Township, Yangon (hereinafter referred to as the "Company" which expression includes its successors and legal representatives) represented by U Maung Kyay on the other part.

The Company has been formed by the the consortium of National Infrastructure Holdings Company (a Myanmar Company), ~~Tellhaw International Engineering & Contracting Company Limited (a Chinese Company)~~, Myanmar Chemical & Machinery Company Limited (a Myanmar Company) and SEPCOIII Electric Power Construction Co., Ltd., (a Chinese Company).

The Company and EPGE shall each be referred to as a "Party", and collectively the "Parties". The Parties agree as follows:

2. Objectives.

As the Government of the Republic of the Union of Myanmar laid down the policy to meet the demand for electric power in the country and to fulfill this demand for electric power in the Regions/States, the Ministry of Electricity and Energy (hereinafter referred to as "MOEE") published in local newspaper an open invitation to all foreign and local investors to submit a proposal for power generation by gas engine generators near Kyaukse Region, using natural gas resources from "SHWE" offshore (hereinafter referred to as "Invitation"). In response to the Invitation, MOEE received various proposals including the commercial offer and technical offer from the Company, and after evaluating the said proposals, MOEE through EPGE selected the Company as the successful tenderer.

References to days or months throughout this Agreement are respectively to calendar days or calendar months, unless otherwise stated.

3. Terms and Conditions.

The terms and conditions of the Agreement are as follows:-

(a) Obligations of EPGE.

Subject to the Company's fulfillment of its corresponding prerequisite obligations:

- i. EPGE (a) shall ensure that (1) the land area for the site (as designated on the map in Annex 1) meets the specifications provided by the Company (the "Site") and the availability of the Site for the term of this Agreement. EPGE shall make the Site available on the issuance of the Letter of Acceptance (LOA) by EPGE to the Company 7th May 2018 (the "Commencement Date"); and (2) land area required for the construction of all required gas supply infrastructure for the Gas Engines (including the Gas Supply Infrastructure and transmission lines)) meets the specifications provided by the Company (the "Ancillary Land"), and (b) shall (throughout the term of this Agreement and until all the gas engines, spare parts, ancillary equipment, consumables, and supplies owned by the Company as described in Annex 4 (the "Gas Engines") have been demobilized) ensure the Company and Company Personnel (as defined below) have all the access and use rights to and over the Site and the Ancillary Land sufficient for the Company to perform its obligations hereunder and to protect the Company's rights and title over the Gas Engines.
- ii. EPGE shall be responsible for ensuring that the Company and the Company Personnel shall not be held liable for any third-party claim as a result of the location or use of the Site or the Ancillary Land by the Company or Company Personnel, including in respect of acceptable noise which shall comply with regulation of Health Safety Environment (Annex 9) that may be created by the Gas Engines.
- iii. EPGE shall at its own cost be responsible for supplying at all times to the gas intake value, the location of which is indicated in Annex 1 (the "Gas Intake Point") the natural gas using (28.5 MMSCFD), at gas pressure (main supply) minimum 181.3 PSI (+/-5%) natural gas from "SHWE" offshore necessary for the operation of the Gas Engines of sufficient quality, pressure and volume meeting the Gas Specifications described in Annex 2 and subject to the Technical Specifications in Annex 4. Continuing gas supply under this clause must first be made available to the Gas Intake Point at least (30)days prior to the Original Commercial Operation Date including for purpose of testing and commissioning of the Gas Engines, and EPGE shall provide 60 days' advance notice for any deviation from the estimated Commercial Operation Date of the availability of such gas supply. EPGE acknowledges and agrees that if it is unable to comply with its obligations under this paragraph, the guaranteed power output under this Agreement (including in Clause 3(b)(ii) and Annex 4) will be affected. Notwithstanding, EPGE shall not be excused from its obligation to pay under this Agreement (including in Annex 5).



- iv. During the term of this Agreement, EPGE shall instruct the Company to operate the Gas Engines according to the guidance of the load dispatch center pursuant to Annex 3.
- v. EPGE shall make arrangements and provide all documentary support as may be required by the relevant Myanmar authorities to ensure that multiple entry visa and Long Stay Permits are issued to allow the requisite personnel of the Company to enter, remain in and depart from Myanmar over the term of this Agreement or any extended term for the purpose of providing the services set out in Annex 6 ("Scope of Services") to meet the Company's obligations hereunder (the "Company Personnel").
- vi. EPGE shall provide approvals for the connection to 132 kV Belin substation for Kyaukse for the purposes of supplying electricity, and all sufficient utilities and power for the provision of the Scope of Services by the Company and cooperate with the Company Personnel with respect to all the activities under this Agreement; the Company shall supply necessary cables and equipment to receive the said power and utilities.
- vii. EPGE shall be responsible for ensuring the energy payment in accordance with the Annex 5 of this Agreement.
- viii. EPGE shall pay energy payment to the Company with effect from the Original Commercial Operation Date where EPGE fails to supply gas as is necessary for the testing and commissioning and operation of the Gas Engines as provided under this Agreement.
- ix. EPGE shall provide the Company with a letter within (12090) days after the Commencement Date, which letter shall contain confirmation of the approval of the project by the Union Government.
- x. EPGE shall exercise its best endeavours to assist the Company with obtaining all relevant permits, licences and approvals, which shall include, but are not limited to, the MIC permit and other supporting documents or recommendation letters from the Ministry of Commerce, the Internal Revenue Department, the Ministry of Planning and Finance and the Customs Department, in relation to this project.

(b) **Obligations of the Company**

Subject to EPGE's fulfillment of its corresponding prerequisite obligations:

- i. The Company shall, by itself and/or through a qualified contractor, provide the Scope of Services.
- ii. The Company shall installed 8 unit Gas Engines of the total installed capacity of (147.768) MW. Subject to Annex 2 and Annex 8, the Company shall guarantee the Gas Engines to

provide the Net Guarantee Output of 145.49 MW, (the "Net Guarantee Output"). The term of this Agreement is 60 months from the Commercial Operation Date, subject to extension of the term by the agreement of both Parties;

iii. The Company shall hold its bank account at Myanmar Economics Bank in Naypyitaw or at Myanmar Economics Bank No.3 in Yangon to receive energy payment made by EPGE.

~~iv. EPGE shall make energy payment in the Myanmar Kyats equivalent to the tariff payable that is denominated in US Dollars, based on the official US Dollars to Myanmar Kyats exchange rate published by the Central Bank of Myanmar on the date of such payment.~~

wiv. The Company shall arrange all required gas supply infrastructure for the Gas Engines at its own cost to enable EPGE to supply the required gas amount, pressure and quality for the Gas Engines ("Gas Supply Infrastructure").

The Gas Supply Infrastructure includes:

- (a) Approximately 4.85 miles of a new 10 inches gas pipeline from South East Asia Gas Pipe (SEAGP) Off-take Point (Kyaukse) to the site for Gas Engines as mentioned in Annex 1.
- (b) New gas Filtering Unit, Pressure Reduction Skid, Metering System and Vent System.
- (c) The Earth Work & Foundation for the Coalescing Gas Filter/Pressure Reduction Skid, Containerized Control Room and Apron.
- (d) The following buildings;
 - One containerized 12 feet x 12 feet control room
 - One 12 feet x 15 feet office building alongside with the control room
 - One Senior House for supervisor who will manage the gas supply infrastructure
 - One Junior House for two shift engineers
 - One Labor Barrack
- (e) Electricity and water supply for the gas supply infrastructure for the Gas Engines.

For the construction of new gas pipe line (about 4.85 miles) of a new 10 inches gas pipeline from SEAGP Off-take Point to the site for Gas Engines and New gas Filtering Unit, Pressure Reduction Skid, Metering System and Vent System, the Company shall arrange all required materials as mentioned in Annex 4 at Bellin 230 kV substation according to the specifications mentioned in Annex 8 at its own cost and EPGE will supervise the construction and installation of the Gas Supply Infrastructure and shall be responsible for all land acquisition and negotiation on the relevant compensation. The cost of construction and land acquisition and relevant compensation shall be borne by the

Company. The Company shall be responsible for the construction and installation of the Gas Supply Infrastructure at its own cost.

~~vi-v.~~ The Company shall arrange all necessary electricity and water supply for the Gas Supply Infrastructure for the Gas Engines at its own cost. EPGE shall operate, or it may designate MOGE to operate, the New Gas Supply Infrastructure. Notwithstanding, EPGE shall remain wholly responsible for the operations of the New Gas Supply Infrastructure. The Company shall at its cost, do the maintenance of the New Gas Supply Infrastructure. Whenever the calibration of gas meter is needed according to the prudent utility practice, the company shall arrange the calibration of gas meter at its own cost. The Company shall be the importer-of-record of all the Gas Engines and related equipment, and the Company shall be responsible for completing all customs clearance and all other required formalities for the importation of the Gas Engines in a timely manner. The Company shall bear all cost related to importation of the Gas Engines including actual shipping, transportation and loading costs for the importation under this Agreement.

~~vii-vi.~~ The Company shall be responsible for obtaining, and maintaining throughout the term of this Agreement, all the permits, approvals, and licenses required under Myanmar laws and regulations for the Company to perform its obligations under this Agreement, including (a) the inland transport of the Gas Engines and (b) conducting of electricity generation, in each case, as required hereunder.

~~viii-vii.~~ The Company shall be responsible for and arrange to [install the 132 KV Transmission Line and connect to the 132 kV bus at the Bellin Substation by installing a new 132 kV switch bay and the required protection equipment in Kyaukse

~~ix-viii.~~ The Company shall be responsible for and arrange to install 1 primary and 1 back-up kilowatt hour meters at the high voltage side of the step-up transformer in the Gas Engines for metering of unit generation and the specification and accuracy class of energy meter shall be provided by EPGE.

~~x-ix.~~ The Company shall commence generating electricity within 286 days after the Commencement Date unless otherwise agreed between the Parties (which shall be known and defined as the "Original Commercial Operation Date"), which date is extended for each day of Excusable Delays. The Commercial Operation Date of the Gas Engines shall be achieved after (4) hours continuous operation of the Net Guarantee Output and the actual heat rate during this 4 hours continuous operation shall be less than or equal to 8,253.80 Btu/kWh (plant overall) at any site condition based on higher heating value (the "Net Guarantee Heat Rate") (the "Commercial Operation Date"). To determine the Actual Output and Actual Heat Rate of COD test

of the Gas Engines, energy meter reading of energy meter located at the outgoing 132 kV feeder of Gas Engines and gas meter reading of gas meter located at the high voltage side of the step-up transformer in the Gas Engines shall be used. The Commercial Operation Test shall be witnessed by the Company and EPGE. The total gas consumption for the testing and commissioning shall be less than or equal to (90) mmscf and supplied by EPGE at its own costs. In the event that the total gas consumption for the testing and commissioning of the Gas Engines exceeds the foregoing amount, the Company shall bear and pay such costs for the excess, which shall be calculated at the prevailing monthly rate published by MOGE. EPGE shall not pay for any electricity charge transmitted to the grid during the testing and commissioning and prior to the Commercial Operation Date. The Company shall be responsible for the cost of all electricity used during the construction and installation of the Gas Engines and the Gas Supply Infrastructure, and EPGE shall not be responsible to pay for any electricity charges during such construction and installation (prior to the testing and commissioning of the Gas Engines).

xix-x.

The Company shall arrange the annual tests for the Net Guarantee Output and Net Guarantee Heat Rate which shall be witnessed by EPGE on the date which is the anniversary of Commercial Operation Date. If the result does not conform to the Guarantee value, the Company shall rearrange the tests for the Net Guarantee Output and Net Guarantee Heat Rate within five (5) days.

xx-xi.

The Company shall ensure that it is able to meet the agreed Net Guarantee Output for dry seasons throughout the term of this Agreement.

xxii-xii.

The Company shall be penalized [150%] of the cost of the additional gas ("Cost of Additional Gas") consumed based on the rate paid by EPGE to the Myanmar Oil and Gas Enterprise if the actual Heat Rate exceeds the guarantee heat rate, provided that the Company shall not be liable for any costs (or pay any penalty) if the additional gas consumption is for any black start due to any reason which is attributable to EPGE. The gas consumption for black start shall be 0.03 mmscf per engine for normal fast ramp up in 10 minutes, If ramp up take up to 20 minutes, gas consumption shall be 0.06 mmscf. For the purpose of this Clause 3(b)(xii), the monthly Cost of Additional Gas shall be calculated as follows:

- (i) if the Actual Heat Rate (Btu/kWh) for that month is equivalent to, or is less than the Net Guarantee Heat Rate, the Cost of Additional Gas shall be zero; or
- (ii) if the Actual Heat Rate (Btu/kWh) for that month exceeds

the Net Guarantee Heat Rate, the Cost of Additional Gas shall be calculated in accordance with the following formula:

$$\frac{(\text{Actual Heat Rate for the month (Btu/kWh)} - \text{Net Guarantee Heat Rate (Btu/kWh)}) \times \text{actual electricity sent out recorded by the electricity meter for the month (kWh)}}{\text{X gas cost (USD/mmBtu)} / 1,000,000}$$

Where:

*Actual Heat Rate for the month (Btu/kWh) = actual gas consumption recorded by MOGE's gas meter for the month (Btu) / actual electricity sent out and recorded by the energy meter located at the high voltage side of the step-up transformer in the Gas Engines for the month (kWh).

**Gas cost shall be provided by MOGE on a monthly basis.

The Company shall pay the Additional Gas Cost (if any) in MMK. The Cost of additional gas (denominated in USD) shall be calculated based on the same USD:MMK (as defined below) exchange rate used in calculating the energy payment for such month in accordance with Clause 4(c).

~~xiv-xiii.~~ The Company agreed to use the gas meter installed at the new gas supply infrastructure for measuring the gas consumption of the Gas Engines.

~~xv-xiv.~~ In respect of any extension of the Original Commercial Operation Date other than the Excusable Delays, the Company shall pay a penalty of Myanmar Kyats 30,000,000 (Myanmar Kyats thirty million only)] per day to EPGE, if the Company fails to achieve commercial operation by the Original Commercial Operation Date. If the penalty in the preceding sentence has accrued for more than thirty (30) days and remains unpaid, EPGE shall be entitled to apply the entire amount of the Performance Bank Guarantee.

~~xvi-xv.~~ The Company shall submit weekly work progress reports every seven (7) days beginning fourteen (14) days after the Commencement Date.

~~xvii-xvi.~~ The Company shall be responsible to run the Gas Engines with black start facility to synchronize national grid in case of black out of national grid.

~~xviii-xvii.~~ Subject to Clause 3(b)(~~xviii~~), the Company shall dismantle the entire Gas Engines at its own cost within six (6) months

after expiry or termination of the term of this Agreement.

~~xix-xviii.~~ The Parties shall, upon request by the Company, discuss with each other in good faith on the terms (including as to rent) by which EPGE shall make available the Site to the Company for such additional period no longer than six (6) months following the expiry of the six (6) months' period specified under Clause 3(b)(~~xviii~~).

~~xx-xix.~~ The Company shall submit scheduled outage and maintenance plan to EPGE at the start of the Commercial Operation Date and thereafter on each anniversary of the Commercial Operation Date over the term of this Agreement.

4. Payment Terms

(a) The energy payment payable by EPGE to the Company hereunder shall be calculated based on the provision of Annex 5.

(b) EPGE shall pay the requisite amount of energy payment on a monthly basis, and all amounts of energy payment payable under this Agreement shall be paid to the Company's Bank Account.

~~(b)(c)~~ EPGE shall make energy payment in the Myanmar Kyats equivalent to the tariff payable that is denominated in US Dollars, based on the official US Dollars to Myanmar Kyats exchange rate published by the Central Bank of Myanmar on the date of such payment.

~~(c)(d)~~ EPGE shall not pay any amount of electric energy more than the Guaranteed Electric Energy amount for dry seasons and wet seasons as provided under Annex 5, unless the amount of electric energy more than the Guaranteed Electric Energy for dry seasons and wet seasons is instructed by EPGE or the load dispatch center. In the first week after the end of each season, all Parties shall determine the amount of excessive electric energy generated by mutual agreement.

~~(d)(e)~~ The Company shall send invoice to EPGE for payment of the monthly energy payment. If there is no objection to the amount invoiced within three (3) business days of receipt of the relevant invoice, the amount invoiced shall be deemed as having been approved by EPGE and EPGE shall pay the invoiced amount by account transfer within thirty (30) days from the receipt of such invoice. In respect of invoices issued for energy payment where excess amounts invoiced shall be set off from the proceeding invoice for energy payment for the following month. If any dispute arises on the amount of energy payment invoiced, the Parties agree to negotiate in the following month the disputed amount and to pay the undisputed amount in accordance with the foregoing.

~~(e)(f)~~ The Company shall pay all kind of tax payable in Myanmar in accordance with the applicable laws.

~~(f)(g)~~ Performance Bank Guarantee:
Within two (2) weeks after the signing of this Agreement, the Company shall deposit a performance bank guarantee with a bank acceptable to Central Bank of Myanmar (the "Performance Bank

Guarantee"), which shall be valid for (30) days after the Original Commercial Operations Date ~~(286) days~~ in the amount of (1,400,000 USD or 2,000,000,000 Myanmar Kyats) to secure its timely completion of its obligations hereunder of the Commercial Operation Date. At the time of providing the Performance Bank Guarantee to EPGE by the Company, EPGE shall return the bid Security to the Company. The Performance Bank Guarantee shall be returned to the Company within seven (7) business days after the successful completion of the Commercial Operation Date.

(h) In respect of any extension of the Original Commercial Operation Date the Performance Bank Guarantee shall be extended and valid for (30) days after the Commercial Operation Date.

~~(g) Completion Date:~~

~~In the event that the Original Commercial Operation Date is extended due to any Excusable Delays, EPGE shall return the Performance Bank Guarantee to the Company on the Original Commercial Operation Date.~~

~~(h)(i)~~ (i) After Commercial Operation Date, the Company shall pay for the electricity consumed from the grid for the purpose of operating the Gas Engines in accordance with the EPGE regulations.

~~(i)(j)~~ (j) Within 14 days after the end of each month, the representatives of the Parties shall meet at the Site to determine the amount of electricity the Company cannot produce due to planned and forced outage of the power plant, system breakdown, transmission line fault, unavailability of Gas Supply and other events. The representatives of the Parties shall record such determination in writing and sign on the same after the amount of electricity has been finalised.

~~(j)~~ In the event that the Company is liable for paying the Cost of Additional Gas pursuant to clause 3(b)(xiv), EPGE shall be entitled to set off the Cost of Additional Gas against any payment payable to the Company.

(k) The Parties shall settle any take-or-pay at the end of each season. Any payment due to the EPGE Parties shall be adjusted to the energy payment in the following month. Any payment due to the Company shall be made in accordance with Clause 4 (l).

~~(k)(l)~~ (l) EPGE shall send credit note to the Company for any penalty payment incurred by the Company to EPGE including but not limited to the COD delay penalty pursuant to clause 3 (b) xiv, the Cost of Additional Gas pursuant to clause 3(b)(xii) and any take-or-pay pursuant to Annex 5. If there is no objection to the amount in credit note within five (5) business days of receipt of the relevant credit note, the amount shall be deemed as having been approved by the Company, and the Company shall pay the amount mentioned in the credit note by account transfer to EPGE's bank account within thirty (30) days from the date of receipt of such credit note. If the Company do not pay the amount mentioned in the credit note within thirty (30) days from the date of receipt of such credit note, EPGE shall be entitled to withhold

the energy payment. If any dispute arises on the amount mentioned in the credit note, the Company shall pay the undisputed amount, and the Parties shall negotiate settlement of the disputed amount.

~~(4)~~(m) EPGE shall be entitled to retain 30% of the energy payment for the last month of the Term for a period of three months, which amount shall be released to the Company thereafter. EPGE shall be entitled to deduct any amount payable to EPGE by the Company from the foregoing retained amount.

5. The compensation for breach of the terms and condition contained in this Agreement.

- (a) The Take or Pay shall be calculated based on seasonally in accordance with Annex 5.
- (b) In the event of EPGE's system failure or total blackout, the Company shall restore full operation of the Gas Engines within twenty (20) minutes for any one of the Gas Engines upon receiving power from the national grid. If the Company shall fail to fulfill this obligation, it shall become the Default of the Company.
- (c) Within fourteen (14) days after the Commencement Date, the Company shall submit the work program to be carried out, failing to submit such program, the Company shall pay Myanmar Kyats 300,000 per day as penalty fees.

6. Term of the Agreement.

The term of this Agreement shall be effective from the date of signing of this Agreement and if the extension of the term or the termination of the term is not made in accordance with the terms and conditions of this Agreement, this Agreement shall be valid for sixty (60) months from the Commercial Operations Date.

If the term of this Agreement is agreed to be extended by both Parties and provided that EPGE shall provide a three (3) months' advance notice, the term shall be extended.

7. Title to Gas Engines and Equipment.

- (a) All the Gas Engines procured and owned by the Company in performing its obligations hereunder shall at all times be and remain, solely and exclusively the property of the Company, and no right, title or interest in any of the Gas Engines shall pass to EPGE or any third party at any time or under any circumstances under this Agreement. The Gas Engines are, and shall at all times remain, personal property, notwithstanding that the Gas Engines and related equipment and supplies or any part thereof may now be, or hereafter become, in any manner affixed or attached to any personal or real property located at the Site or otherwise. EPGE shall not exercise any right to or claim over the Gas Engines.
- (b) The Parties hereby confirm their intent that this Agreement shall constitute provision of required Scope of Services only and does not

constitute and shall not be characterized as an engine or equipment sale or financing transaction or other business investment or enterprise. The Parties are not anything other than that of power producer and purchaser, and a service provider and a customer, and the Parties do not intend in any manner to change or to impact the ownership of the Gas Engines and related equipment and supplies by the Company.

8. Defaults

- (a) EPGE shall be in default under this Agreement (an "EPGE Default") upon the occurrence of any of the following events:
- i. The energy payment, unless disputed, is not paid within thirty (30) days from the date of the invoice,
 - ii. EPGE is in breach of any obligation for which this Agreement does not provide exclusive remedies; provided that: (A) the Company shall first have provided EPGE with written notice of the nature of such breach, and (B) EPGE shall have failed within forty-five (45) days after receipt of such notice (or such extended period as is mutually agreed) either (1) to commence to cure such breach and diligently thereafter to pursue such cure, or (2) to provide reasonable evidence that no such breach has occurred.
- (b) Upon the occurrence of any EPGE's Default, the Company may terminate this Agreement in accordance with Clause 9 of this agreement.
- (c) the Company shall be in default under this Agreement (an "Company Default") upon the occurrence of any of the following events:
- i. Actual Heat Rate of the power plant exceeds more than five percent (5%) of the Net Guaranteed Heat Rate for more than three (3) aggregate months during the contract Term.
 - ii. the Company failing to maintain the Net Guarantee Output more than one (1) month during the dry seasons unless such failure is caused by responding to EPGE's dispatch, or there is a reasonable excuse for such failure subject to EPGE's decision,
 - iii. the Company fails to comply with the applicable environmental laws of Myanmar during the term of the contract,
 - iv. the Company is in breach of any obligation for which this Agreement does not provide exclusive remedies, provided that: (A) EPGE shall first have provided the Company with written notice of the nature of such breach, and (B) the Company shall have failed within forty-five (45) days after receipt of such notice (or such extended period as is mutually agreed) either (1) to commence to cure such breach and diligently thereafter to pursue such cure, or (2) to provide reasonable evidence that no such breach has occurred.



- (d) Upon the occurrence of any Company Default, EPGE may terminate this Agreement in accordance with Clause 9 of this Agreement.

9. Termination

- (a) If this Agreement is terminated before the stipulated period for sixty (60) months (as renewed hereunder) for any reason, EPGE shall remain obligated to pay the energy payment for the remaining period to the Company, subject to a maximum termination amount equal to the energy payment for a period of thirty six (36) months. If the remaining period is less than thirty six (36) months, EPGE will only pay the energy payment for the remaining period. Such remaining amount shall be paid in a lump sum within thirty (30) business days after the termination of this Agreement.
- (b) Subject to Clause 9(e), the Company shall not terminate this Agreement other than for EPGE Default.
- (c) Subject to Clause 9(e), EPGE shall not terminate this Agreement other than for Company Default.
- (d) In the event of EPGE Default or Company Default under Clause 8, the non-breaching party shall provide termination notice of a Default, after which, the breaching party shall have sixty (60) days to cure this Default before the non-breaching Party may exercise its right to terminate this Agreement.
- (e) This agreement can be terminated if both Parties agreed mutually to terminate this agreement or if either party is being affected by any Force Majeure events for more than 180 days consecutively.

10. Remaining rights after termination of this Agreement.

All the rights and obligations of the Parties accrued prior to the expiration or termination of this Agreement and the confidentiality and indemnity provisions shall survive the expiration or termination of this Agreement. No other rights and obligations provided herein shall be effective after the expiration or termination of this Agreement.

11. Force Majeure.

- (a) The term "Force Majeure" means restrictions of the Government (political force majeure), natural earthquakes, fire, floods, storms, riots, water risk, strikes, war, lookouts, industrial disturbance, plagues, landslide, cyclone, lightning, explosion, civil unrest, blockades and any other causes which are beyond the reasonable control of either Party and which, notwithstanding the exercise of due care and diligence, cannot be overcome by either Party.
- (b) If either Party is temporarily rendered unable wholly or partly by Force Majeure to perform its duties or accept the performance by the other Party under this Agreement, it is agreed that the affected Party shall give notice to the other Party within fourteen (14) days after the occurrence of the cause relied upon, giving full particulars in writing of such Force Majeure. The duties of such Party as are affected by such

Force Majeure shall be suspended ~~(except in the instance of Political Force Majeure (for clarity, "Political Force Majeure" shall mean: any act or omission by any governmental authority (including changes in laws but except lawful actions taken by any governmental authorities in response to acts or omissions of the Company or its employees, officers, contractors, servants or agents), which directly and adversely affects the performance of the Company of any of its obligations under this Agreement), in which case EPGE shall continue to pay the requisite energy payment)~~ during such period during the continuance of the disability so caused, provided that the Party affected shall as far as possible, within its control recover from the effects of such Force Majeure event with all reasonable dispatch.

- (c) Neither Party shall be responsible for any delays, damage or loss caused by Force Majeure ~~except for Political Force Majeure.~~

12. Excusable Delays.

The Company shall not have any liability to EPGE and shall not be considered to be in breach of any of its obligations under this Agreement for any delay in the commencement of commercial operation or any delay or failure in the performance of any obligation under this Agreement, to the extent that such delay (an "Excusable Delay") is a direct or indirect result of any of the following:

- (a) If this Agreement has not become effective within ninety (90) days from the Commencement Date by the reasons solely attributable to the EPGE;
- (b) Any delay in issuing any required permit, license or approval, for which EPGE is responsible and any delay in providing the required assistance to the Company in the course of obtaining the required permit, license or approval for which the Company is responsible;
- (c) EPGE fails to acquire the land area for the Site or the Ancillary Land, or make the Site or the Ancillary Land available on the Commencement Date and throughout the term or EPGE fails to comply with its other obligations with respect to the Site or the Ancillary Land (including the granting of access and use rights) according to Clause 3(a)(i);
- (d) EPGE fails to make available the natural gas as required hereunder according to Clause 3(a)(iii);
- (e) An occurrence of a Force Majeure event; or
- (f) Any other delay which cannot be solely attributed to the Company's default.

If there is an Excusable Delay resulting in a delay to the Original Commercial Operation Date, the Original Commercial Operation Date shall be extended for each day of the Excusable Delay.

13. Confidentiality

The Parties to this Agreement shall keep secret and confidential and shall not disclose the terms and conditions of this Agreement or any other confidential, financial or trading information relating to the other Parties during the term of

this Agreement and following the expiration or termination hereof, whether to their respective officers, directors, employees, agents, contractors, sub-contractors or otherwise save (i) as expressly provided in this Agreement; (ii) with the prior consent of the other Party; (iii) for project financing purpose of the Company; or (iv) for information which are already in the public domain or in the possession of the receiving Party prior to its disclosure.

14. Representations and Warranties.

Each Party hereby warrants and represents to the other Party as follows:

- (a) It is duly registered in the jurisdiction of their address in the Preamble hereto, validly existing in such jurisdiction and has the power to execute this Agreement.
- (b) All of the formalities required by it consistent with its obligations (and subject to the other Party's obligations) for the conclusion and performance of this Agreement are complete and legally effective.
- (c) There is no judgment, ruling, verdict or administrative action from any court, arbitral tribunal, administrative intervention agency that substantially affects its performance of this Agreement when it is executed.
- (d) The internal authorization required by it to execute this Agreement has been completely obtained; the persons signing this Agreement are its legal or authorized representatives. This Agreement shall be legally binding upon it after becoming effective.

15. Amendments.

This Agreement shall not be amended, save with the written consent of both the Parties.

16. Transfer of Obligations.

- (a) No Party shall transfer rights and obligations, wholly or partially, without the written consent of the other Party. If the transferor can prove that the proposed transferee has sufficient financial and technical capabilities to perform the rights and obligations under this Agreement, the non-transferring party shall not withhold or delay the provision of its consent to such transfer.
- (b) For the purpose of financing the Project, the Company may, with due notification to EPGE, assign or create a security interest over its rights and interests under or pursuant to this Agreement, any project agreement, the Project, the moveable property, the intellectual property, the revenues or any other rights or assets of the Company.
- (c) If EPGE decides to, with due notification, at any time during the term assign or otherwise transfer its rights or obligations under or pursuant to this agreement without the prior written consent of the Company to a restructured successor entity, provided that the restructured successor entity (i) if such entity has been established through a due process of law by the Government of the Republic of the Union of Myanmar and owned or controlled by the Government of the Republic

of the Union of Myanmar, (ii) or is an entity not owned or controlled by the Government of the Republic of the Union of Myanmar but which is capable of performing the obligations of EPGE under this Agreement, EPGE shall ensure the restructured successor entity shall fully undertake and perform the contractual obligations under this Power ~~Purchase~~Rental Agreement which are originally undertaken and performed by EPGE. ”

17. Mutual Agreement.

This Agreement is made and executed in the English language only. Each Party retains one executed original counterpart both of which shall be deemed to be originals of this Agreement and shall be deemed as being one and the same.

This Agreement is for the benefit of the Parties herein and shall be binding on the successors and representatives of the Parties herein. This Agreement shall not be presumed to give rise to any responsibilities to third parties.

18. Indemnification.

Subject to the limitations set forth elsewhere in this Agreement, each Party (the "Indemnifying Party") shall indemnify and hold harmless the other Party (the "Indemnified Party") from and against any and all liabilities, obligations, losses, damages, penalties, claims, actions, suits, costs, expenses or disbursements (including all reasonable legal fees and expenses) of any kind and nature whatsoever that may at any time or times be imposed on, incurred by, or asserted against any Indemnified Party (whether or not also indemnified against by any other person) as a result of:

- (a) any breach by the Indemnifying Party of its obligations under this Agreement;
- (b) any breach by the Indemnifying Party of its representations and warranties under this Agreement; or
- (c) claims of any kind (including claims based on personal injury or property damages) asserted against an Indemnified Party by any third parties arising from any act or omission of the Indemnifying Party.

19. Waiver of Immunity.

To the extent that either Party may, in any jurisdiction, claim for itself or its assets immunity from suit, execution, attachment (whether in aid of execution, before judgment or otherwise) or other legal process, such Party agrees not to claim, and hereby waives, such immunity to the fullest extent permitted by the laws of that jurisdiction, intending in particular, but without limiting the generality of the foregoing, that this waiver shall apply in respect of any proceedings occurring in Myanmar.

20. Dispute Resolution.

Any dispute arising from this Agreement shall be resolved amicably through negotiation between the Parties. If resolution cannot be obtained in such manner within (30)days, resolution shall be sought through final and binding

arbitration. The arbitration proceedings shall be conducted in accordance with the UNCITRAL Arbitration rules in effect at the time when the arbitration proceedings are commenced and which are hereby incorporated by reference into this clause. The venue of arbitration shall be Yangon, Myanmar. The language of arbitration shall be English. Costs of arbitration shall be determined by the arbitral tribunal.

21. Governing Law.

This Agreement shall be governed by and construed in accordance with the laws of the Republic of the Union of Myanmar, without regard to its principles of conflicts of law.

22. Guaranteed Technical Parameters of the Power Plant.

The Guaranteed Technical Parameters for Power Plant are provided at Annex 8.

23. Renegotiation.

In the event that any situation or condition arises due to circumstances not envisaged in this Agreement and warrants amendments to this Agreement, the Parties shall re-negotiate and make the necessary amendments.

24. Annexes

The Annexes attached to this Agreement are hereby made an integral part of this Agreement.

The Annexes are:

- Annex 1 The Site
- Annex 2 Gas Specifications
- Annex 3 Dispatch Procedures
- Annex 4 Technical Specifications
- Annex 5 Payments and Tariffs
- Annex 6 Scope of Services
- Annex 7 Company's Designated Bank Account
- Annex 8 Guaranteed Technical Parameters for Power Plant
- Annex 9 Capability Comply with Regulation of Health and Safety
- Annex 10 Invoice format

24.25. Notices.

- (a) Any notice or other communication in connection with this Agreement or with any arbitration under this Agreement shall be in writing in English (a "Notice") and shall be sufficiently given or served if delivered or sent:

In the case of Electric Power Generation Enterprise to:

Address : Building No.27,Naypyitaw, Myanmar
Email : hpgemd@moep.gov.mm
Facsimile : +95 67810 4292
Facsimile : +95 67810 4290
Attention : U Khin Maung Win

Copy to : Managing Director
U Han Zaw
Chief Engineer, Thermal Power Department

In the case of the Company to:

Address : No. 36, Theinphyu Road, Pazundaung Township,
Yangon
Email : maungkyay@national-infra.com
Facsimile : +95 1200273
Attention : U Maung Kyay

Or (in either case) to such other address or fax number or email address as the relevant party may have notified to the other in writing in accordance with this clause.

- (b) Any Notice may be delivered by hand or sent by fax. Without prejudice to the foregoing, any Notice shall conclusively be deemed to have been received the next business day, if sent by fax, or at the time of delivery, if delivered by hand or at the time of transmission. Email shall be used as information only.

The duly authorized representatives of each of the Parties have signed this Agreement at the place and on the date written above, and in the presence of witnesses.



[Remainder of page intentionally left blank; Signatures on following pages]



For and on behalf of EPGE

For and on behalf of PowerGen Kyaukse
Company Limited

U Khin Maung Win
Managing Director

U Maung Kyay

[●]

Witnesses

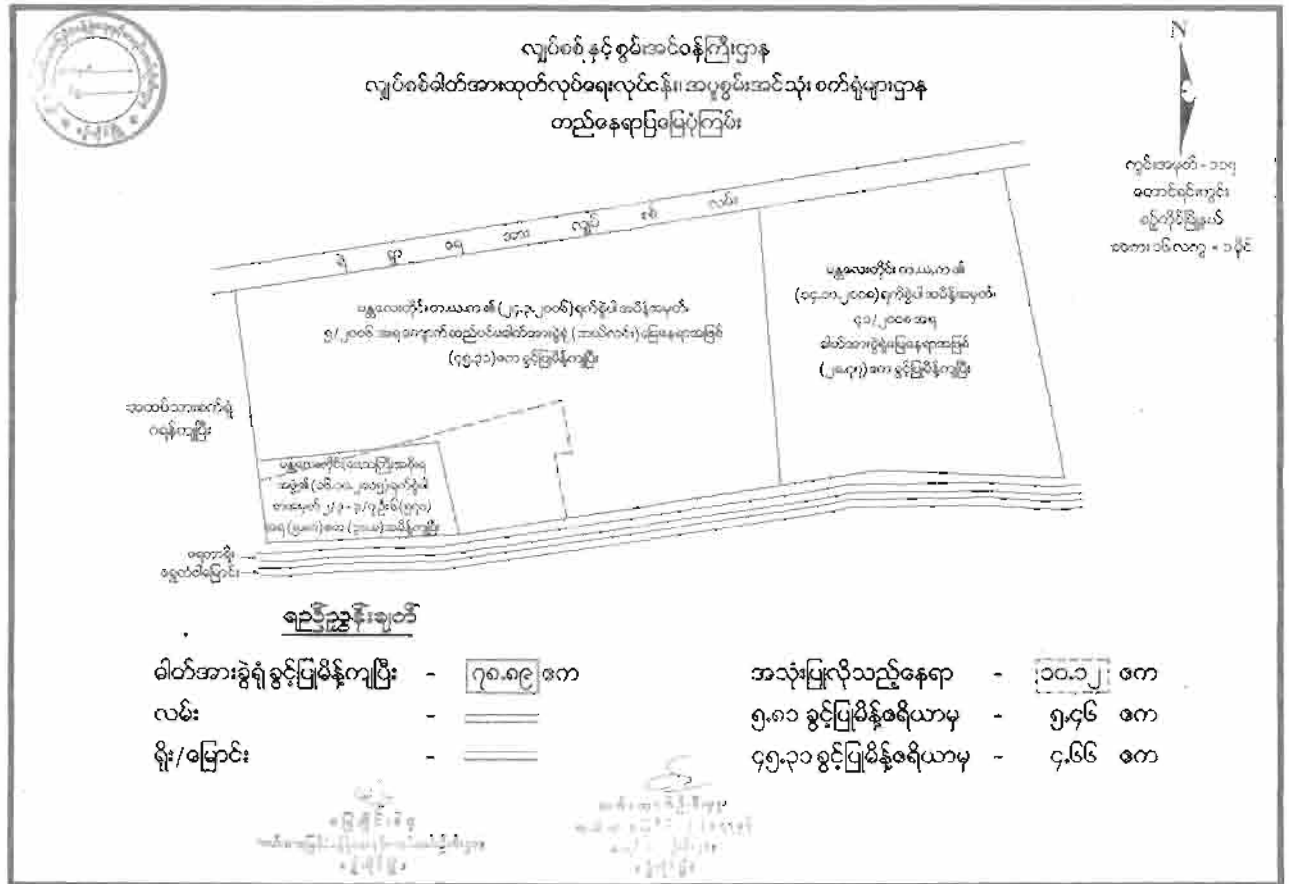
General Manager
Finance Department

[●]

Chief Engineer
Thermal Power Department

[●]

Annex 1
The Site & Intake Delivery Point



Annex 2
Gas Specifications

SHWE Gas Composition

As attached

Gas Specification

SHWE Gas Composition

Component Name	Mole Percent	BTU Gross	Relative Density
C6 + 47/35/17	0.0199	1.05	0.0007
PROPANE	0.0297	0.75	0.0005
i- BUTANE	0.0109	0.36	0.0002
n - BUTANE	32.2 PPM	0.11	0.0001
i - PENTANE	49.7 PPM	0.2	0.0001
n - PENTANE	0.0000	0.00	0.0000
NITROGEN	0.2218	0.00	0.0021
METHANE	99.5529	1007.81	0.5514
CARBON DIOXIDE	0.0491	0.00	0.0007
ETHANE	0.1073	1.9	0.0011
TOTALS	100	1012.18	0.557

Comprssibility Factor (1/7)@ 14.73000 PSIA & 60.0 DEG.F= 1.100198

Base Pressures =	14.73
Gross Dry BTU =	1014.19 Corrected/Z
Real Relative Density Gas =	0.5578
Un-normalized Mole Percent =	99.874
WOBBE =	1357.91



Annex 3
Dispatch Procedures

1. The Company acting through Company Personnel shall declare daily capacity available and required gas volume for dispatch twenty (24) hours ahead of the dispatch period ("Declared Capacity").
2. The Company acting through Company Personnel shall maintain a dispatch log detailing declared availability and nominated power production.
3. Under a day ahead dispatch regime, for each day EPGE shall nominate the required hourly power production from the Gas Engines for the next day ("Nominated Capacity"), and to the extent it is technically feasible for safe operation of the grid, EPGE shall nominate power in volumes to allow for optimal fuel consumption efficiency of the facility. This means, to the extent feasible, the dispatcher will nominate power in engine blocks which will allow each engine to operate at full load.
4. Should EPGE require adjustment to this dispatch schedule after their original nomination, the Company shall use its commercially reasonable efforts to amend the production schedule.
5. Communications between the Company and EPGE shall take place by phone and written correspondence. Phone and call charges shall be paid by the Company.
6. Prior to the Original Commercial Operation Date, the Parties shall agree on communications metering (electrical and natural gas) and protection settings procedures. Unless the Parties agree otherwise EPGE meter shall be used for billing purposes.
7. Should EPGE gives dispatch instruction to increase the number of the Gas Engines to be operated, the Company shall comply with the instruction within 20 minutes in respect of each Gas Engine.



Annex 4
Technical Specifications

- Gas Engines specification
- Plan layout drawing and single line diagram
- Gas pipeline infrastructure's specification and piping and instrumentation diagram



0 GENERAL**0.1 EXECUTIVE SUMMARY****General**

This technical specification provides the reader with the basic technical data required for an evaluation of the plant's technical features.

The proposed Modular power plant is designed and engineered in accordance with this technical specification.

The technical data stated in this document is for guidance and evaluation purposes only. Performance data and related reference conditions are separately stated in the supply contract documents.

The governing law and the procedures of dispute resolution for this technical specification, shall be as stipulated in the Agreement supply contract. If there is any discrepancy between the English version and a translated version of this technical specification, the English version shall prevail and have precedence over the translation.

Design and construction

The essence of the design is simplicity, safety and reliability.

The equipment is designed to prevent accidental contact with moving, hot or tensional parts and to minimise ingress of dust and dirt.

The structure and layout design of the power plant permits access to all parts for inspection, maintenance and repair.

Wärtsilä quality procedures and test & inspection procedures are applied to ensure product quality throughout the design and manufacturing process. Special attention is paid to the engine and auxiliary unit testing, as well as inspection and testing of the final installation.

Wärtsilä's quality and environmental management systems fulfil, and are certified according to, ISO 9001:2000 and ISO 14001:2004.

Main parts and devices like panels, valves, pumps, etc. are marked with engraved name plates indicating their item codes used in Wärtsilä documentation and manuals.

English is used in all documents, correspondence and nameplates.

SI units of measurement are used in all technical documents.

The design and manufacture of power plant equipment supplied by Wärtsilä is subject to constant review, and due to improvements and optimisation of materials, design and tooling techniques, manufactured equipment may be improved from the specification given below.



Deviations to assumptions made in this specification

If the purchaser's requirements, local building codes, zoning requirements, Grid/Interconnection Study, Environmental Impact Assessment, Building Permit Application, Soil investigation, Topographical survey, Contamination evaluation or site Demolition requirements or other conditions deviate from the assumptions made herein and have an impact on Wärtsilä's scope of supply, the scope of work shall be reviewed, and the price adjusted accordingly.

Project Management and Engineering

The delivery of the Modular power plant will be managed by a dedicated project team, comprised of a project manager who has the overall responsibility for the delivery. The project manager is assisted by project engineers for the main technical disciplines.

The project team is the single point of contact with the purchaser's organisation, and has full authority to decide technical and commercial issues related to the project on behalf of Wärtsilä.



0.2 TYPE OF PRODUCT

The proposed Modular power plant is designed for base load operation and is intended for power generation.

The system is designed for parallel operation with the public supply system.

The Modular power plant is designed to use Natural gas as the main fuel.



0.3 MAIN DATA AND CONDITIONS**Configuration**

The Modular power plant is equipped with 9 engines of the W18V50SG engine type as the prime mover.

Main data and conditions gives the allowed operating range for the finalised Power Plant.

Design ambient temperature

Altitude above sea level	100	m
Ambient air temperature	35	°C

Maximum ambient temperature

Maximum ambient air temperature	40	°C
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Minimum ambient temperature

Minimum ambient air temperature	15	°C
Relative humidity at minimum ambient temperature	100	%



0.4 OPERATION MEDIA

General

To maintain the components and equipment of the Modular power plant in good operating condition, and to minimise wear and tear, it is of utmost importance that all operating media used are of good quality and within the specifications given by Wärtsilä.

Below are the main parameters for the major operating media of the Modular power plant. The complete specification and requirements for all the operating media needed are given in the Operation and Maintenance Manuals delivered for the Modular power plant.

Fuels

Wärtsilä engines are designed and developed for continuous operation on fuels with a quality within the recommended limits below. These values indicate the limits for the power plant and the individual limits for the engines. Fuels having one or several values close to this limit might have a negative impact on the performance and component lifetime.

Gas fuel

Parameter		Limit	Unit
Lower heating value (LHV) ¹ for system design	Minimum	38.0	MJ/m ³ N
Methane number ² , engine performance related	Minimum	80.0	
Lower heating value (LHV) ³ , engine performance related	Minimum	30.0	
Methane contents, CH ₄	Minimum	70	vol -%
Hydrogen sulphide, H ₂ S	Maximum	0.05	vol -%
Total sulphur ⁴	Maximum	5	mg/kg
Hydrogen, H ₂	Maximum	3	vol -%
Carbon dioxide	Maximum	20	vol-%
Water and hydrocarbon condensates before the engine		Not Allowed	
Ammonia	Maximum	25	mg/m ³ N
Chlorine + Fluorines	Maximum	50	mg/m ³ N
Particles or solids, content	Maximum	50	mg/m ³ N
Particles or solids size	Maximum	5	µm
Gas inlet temperature	Minimum/ Maximum	0 ⁵ / 50	°C

¹ Values given in m³_N are at 0 °C and 101.3 kPa

² Methane number (MN) calculated according to EN 16726.
Minimum value depends on the receiver temperature.

³ Values given in m³_N are at 0 °C and 101.3 kPa

⁴ Applies when CO catalyst is used

⁵ Minimum of 15°C above gas fuel dew point




Gas pressure to gas regulating unit	Minimum	4.9 ⁶	bar (g)
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Engine cooling water

Corrosion inhibiting additives must be used in the engine cooling water. Only additives of the brand and types approved by Wärtsilä are allowed to be used. The additive manufacturer's dosage, pH, and testing recommendations shall be followed.

If a nitrite-based corrosion inhibitor is used, the aim should be to keep a nitrite (NO₂) content of approximately 1500 mg/l, calculated as nitrite. The pH shall be between 8.5 and 9.5.

The limits for engine cooling (primary circuit), turbine washing, and separator operating water must meet the following requirements:

pH at 25°C	>6.5	-
Conductivity at 25°C (limit for turbine washing only)	<100	mS/m
Total hardness Ca ²⁺ + Mg ²⁺	<10	°dH
Silica as SiO ₂	<50	mg/l
Chlorides Cl ⁻	<80	mg/l
Sulphates as SO ₄ ²⁻	<150	mg/l

The general appearance should be clear, colourless, and free of undissolved materials.

Charge air

The highest allowed concentration of impurities at the charge air inlet is:

Chlorides (Cl ⁻)	1.5	mg/Nm ³ ⁷
	1.16	mass-ppm
Hydrogen Sulphide (H ₂ S)	375	µg/Nm ³
	0.25	vol.-ppm
Sulphur Dioxide (SO ₂)	1.25	mg/Nm ³
	0.43	vol.-ppm
Ammonia (NH ₃)	94	mg/Nm ³
	0.125	vol.-ppm
Minimum filtration class	F5	EN 779:2002

⁶ Dependent on the lower heating value (LHV) of the gas. Minimum pressure given at LHV minimum 36 MJ/m³_N, if LHV is lower, minimum required pressure will increase.

⁷ Nm³ given at 0 °C and 1013 mbar

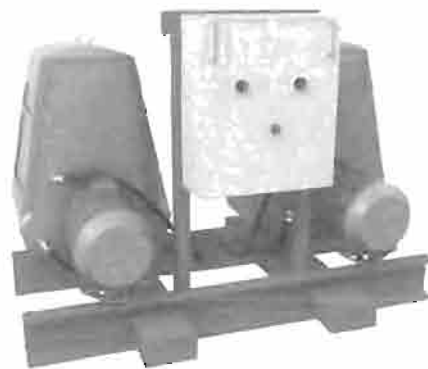
Lubricating oil

Only lubricants that are approved by Wärtsilä are allowed to be used. The major lubricating oil suppliers have certain lubricating oils which are approved by Wärtsilä.

The properties of the fresh lubricating oil must meet the following requirements

Viscosity class		SAE 40	
Viscosity Index (VI)	Minimum	95	
Sulphated Ash Level	Maximum	0.6	% mass
Alkalinity (BN)		4 - 7	mg KOH/g





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ew

0.6

CODES AND STANDARDS

The design complies with the following standards:

Mechanical systems

The mechanical systems are designed, manufactured, constructed and installed according to the appropriate extent of the following standards:

Description	Code
- Engine test run	ISO 15550 except for the fuel consumption calculation, which is based on Wärtsilä's experience of this engine type.
- Vibration	ISO 8528 part 9
- Design	EN 12100
- Pipe design calculations	EN 13480 and DIN 2413
- Welding	EN 1011
- Stairs and platforms	ISO
- Dimensional standards for installation materials (pipes, beams, etc.)	DIN, ISO, SFS and EN
- Vertical tanks	API 650 or EN 14015
- Horizontal tanks	EN 12285, excluding nozzle location
- Typical material standards	DIN, SFS and EN

Abbreviations

DIN:	German Standard (Deutsche Institute für Normung)
EN:	European Standard
ISO:	The International Organization for Standardisation
SFS:	Finnish Standards Association
API:	American Petroleum Institute

Electrical systems

The electrical systems are designed, manufactured, constructed and installed to applicable parts according to the following standards:

Description	Code
- Generator	IEC 60034
- Transformer, oil-type	IEC 60076
- Transformer, dry-type	IEC 60076
- MV switchgear	IEC 62271-200 or IEC 62271
- LV switchgear	IEC 61439-2
- Enclosure protection	IEC 60529
- WOIS workstation hardware	IEC 60950
- WOIS workstation software	Applicable parts of VDE 3699
- Earthing network	IEEE 80
- Control panels	IEC 60439-1
- PLC software	IEC 61131-3
- Lighting installation	IEC 60598
- Fire detection	EN 54
- Protection against lightning	IEC 62305

Abbreviations

IEC:	International Electrotechnical Commission
IEEE:	Institute of Electrical and Electronics Engineers
EN:	European Standard
VDE:	The Association for Electrical, Electronic & Information Technologies
WOIS	Wärtsilä Operator's Interface System

A POWER GENERATION EQUIPMENT

A1 GENERATING SET

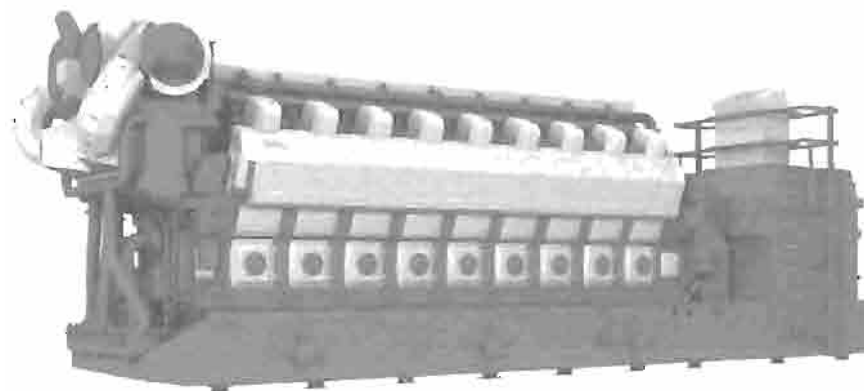


Figure 2 Example of a Wärtsilä 18V50SG generating set arrangement

The W18V50SG engine and generator are mounted on base frames. The base frames are flexibly mounted on a concrete foundation by means of steel springs.

The main dimensions of the W18V50SG generating set are⁸:

Length	18.781	m
Width	4.09	m
Height	6.02	m
Weight (dry)	364870	kg
Weight (wet)	379870	kg

A1.1 ENGINE

Wärtsilä 18V50SG engine

General engine description

The Wärtsilä 50SG engine is a spark-ignited lean-burn gas engine. The engine works according to the Otto cycle. Gas is mixed with air before the inlet valves, and the gas-air mixture is compressed during the compression phase. Gas is also fed into a small pre-chamber, where the gas mixture is rich compared to the gas in the cylinder. At the end of the compression phase, a spark plug ignites the gas-air mixture in the pre-chamber. The flames from the nozzle of the pre-chamber ignite the gas-air mixture in the whole cylinder. After the working phase, the exhaust gas valves open, and the cylinder is emptied of exhaust gases. The intake air is turbocharged and intercooled.

⁸ The dimensions and weight may vary depending on the generator make and type.

Due to a high degree of integrated functions on the engine, only a minimum amount of support from external systems is needed, thus minimising the interconnections to external systems. An embedded engine control system controls the combustion process individually in each cylinder.

The engine is designed for continuous operation on gas

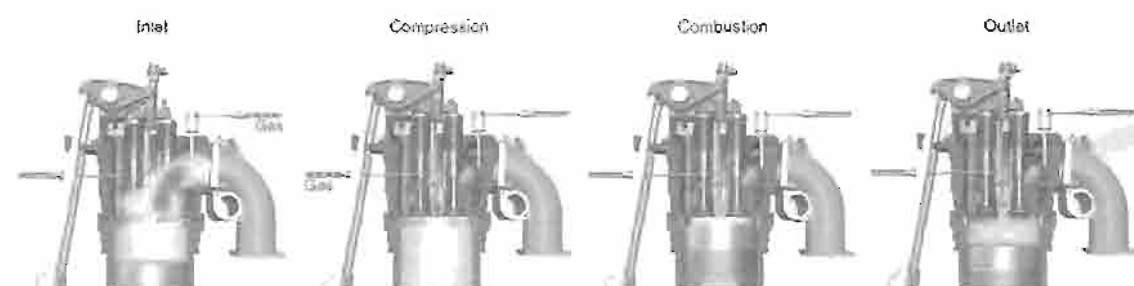


Figure 3 The combustion process

Engine main data

Configuration	V
Number of cylinders	18
Cylinder bore	500 mm
Stroke	580 mm
Speed	500 rpm
Mean effective pressure	22 kPa
Mean piston speed	9.67 m/s
Compression ratio	11.5:1
Number of inlet valves	2
Number of outlet valves	2
Direction of rotation facing towards flywheel	Clockwise

Engine block

The engine block is made of nodular cast iron and is cast in one piece; it incorporates the jacket water manifold and the camshaft bearing housings. The crankshaft is underslung-mounted on the engine block.

The bearing caps, also made of nodular cast iron are fixed from below by hydraulically tightened screws. They are laterally guided by the engine block both at the bottom and at the top. The horizontal side screws at the lower guiding are hydraulically tightened as well. Together this provides a very rigid crankshaft bearing. A combined flywheel/thrust bearing is located at the driving end of the engine.

The oil sump is of a light welded design, and mounted below the engine block. It is sealed by O-rings.

Crankshaft

The crankshaft is made of high tensile steel, and forged in one piece. It is fully balanced to counteract bearing loads from eccentric masses. The high degree of balance results in an even and thick oil film for all bearings.

Connecting rod

The connecting rod is made of forged alloy steel and it is partially machined. All connecting rod bolts are hydraulically tightened. The gudgeon pin bearing is of tri-metal type. Oil is led to the gudgeon pin bearing and piston through a bore in the connecting rod. The connecting rod is of a three-piece design, which makes it possible to unmount the piston without opening the big end bearing.

Main bearings and big end bearings

The main bearings and the big end bearings are of tri-metal design, with a soft and thick running layer.

Cylinder liner

The cylinder liners are centrifugally cast from a special alloyed iron to create wear resistance and high strength. The top collar of the cylinder liner is provided with bore cooling for efficient control of the liner temperature. The liner is equipped with an anti-polishing ring at the top, to prevent bore polishing.

Piston

The piston is of composite type with a steel crown and a nodular cast skirt. The piston skirt and cylinder liner are lubricated by a unique piston skirt lubricating system. The piston top is cooled by the cooling gallery design. The piston ring grooves are hardened. The piston ring set consists of two compression rings and one spring-loaded oil scraper ring. The piston rings are located in the piston crown.

Cylinder head

The cylinder head is made of nodular cast iron, and it is fixed to the cylinder block/liner with hydraulically tightened bolts. Each cylinder head has two inlet and two exhaust valves; all valves are equipped with rotators. The exhaust valve seats are directly water cooled. The valve seat rings are made of specially alloyed iron with good wear resistance.

Camshaft and valve mechanism

The cams are integrated in the drop-forged shaft material. The journal bearings consist of separate pieces, which are fitted to the camshaft pieces by flange connections. This solution makes it possible to remove individual cylinder camshaft pieces sideways. The camshaft bearing housings are integrated in the engine block casting. The camshaft is driven from the crankshaft through a fully integrated gear train.

Fuel gas admission system

On the engine, the fuel gas is supplied through common pipes along the engine, and continues with individual feed pipes to each main gas admission valve. There are two common pipes per bank, one for the main gas, and one for the pre-chamber gas supply. The gas pressure in both lines is controlled separately and there is a filter before every gas admission valve.

The main fuel gas is mixed with the intake air before the inlet valve in the cylinder head. Since the gas valve is timed independently of the inlet valve, scavenging of the cylinder takes place without a risk that unburned gas escapes directly from the inlet side to the exhaust side.

The gas admission system is dynamically controlled to maintain the required load and speed. The quantity of main fuel gas admitted to each cylinder is constantly controlled with the combustion pressure and temperature by means of individual gas admission valves for each cylinder.

The main fuel gas admission valves function as the engine speed regulator, and the valves control the amount of gas fed to each cylinder of the engine. Each cylinder is equipped with its own fuel gas admission valve. The valve is located on the cylinder head manifold and the gas is fed into the inlet channel of the cylinder head. The main gas valve is a direct actuated solenoid valve. It is possible to adjust the amount of gas fed to the individual cylinders with the engine automation system when the engine is running.

The pre-chamber gas control valve is mechanically actuated by the inlet valve yoke, which is directly driven by the camshaft/push rod. It takes care of the gas admission to the pre-chamber. The valve is located in the pre-chamber, and the amount of injected gas is controlled by the gas pressure.

The pre-chamber is the ignition source for the main fuel charge. The pre-chamber is optimised to give the best possible ignition, with rapid and repeatable combustion.

Ignition system

An ignition module located on top of each cylinder head cover contains the ignition coil. The module is connected to the spark plug with a high-voltage extension. The spark plug is a high-energy type, specially manufactured for use in gas engines. The spark plug is located in the pre-chamber, and the timing for the spark is controlled by the engine control system.

Lubricating oil system

The engine has a wet oil sump system. The system lubricates the main bearings and the cylinder liners in the engine. Oil is led through bores in the engine block, and heads to other lubricating points like the camshaft bearings, the rocker arm bearings and the valve mechanism gear wheel bearings. The turbochargers are also connected to the engine lubricating system. Furthermore, the lubricating oil is also cools the piston crowns.

The lubricating oil system built on the engine comprises the following equipment:

- Pipes made of steel
- Oil sump of wet type, equipped with a low-level switch connected to the engine automation system
- Main lubricating pump equipped with an overflow valve. The pump is of screw type
- Start-up/running-in filters in the oil inlet line to each main bearing. These are removed after the engine is commissioned

Starting Air System

The engine is started with compressed air, with a nominal pressure of 30 bar. The start is performed by directing air into the cylinders through starting air valves in the cylinder heads. The starting system includes a slow turning system, which directs a few engine revolutions in the beginning of the starting sequence, as a safety check.

The starting air system built on the engine comprises the following equipment:

- Pipes made of steel
- Starting air master valve, electrically and manually operated
- Start blocking valve to prevent starting when turning gear is engaged
- Starting air distributor
- Starting air valves in A-bank cylinder heads
- Slow turning device
- Flame arrestors

Cooling water system description

The engine is cooled by a closed circuit cooling water system, divided into a high temperature (HT) circuit and a low temperature (LT) circuit.

Thermostatic valves control the LT water inlet, and HT water outlet temperatures. The cooling water is cooled in a separate cooler in the external cooling water system.

The engines are equipped with a two-stage charge air cooling system. The cooler is built onto the engine.

The engine cooling water system is comprised of the following equipment:

- Pipes made of steel
- Engine-driven circulating water pump for the low temperature cooling circuit
- Engine-driven circulating water pump for the high temperature cooling circuit
- Non-return valves after the circulating pumps

Charge air system

The compressor side of the turbocharger feeds air into the cylinders through the charge air cooler and the charge air receiver. The engine is equipped with one turbocharger per cylinder bank. The turbocharger is of the axial turbine type.

The engine charge air system comprises the following equipment:

- Compressor on the turbochargers
- First stage charge air cooler
- Second stage charge air cooler
- Fresh water cleaning device for the compressor

Exhaust gas system

The engine mounted Mono-SPEX (Single Pipe Exhaust system) gas pipes, made of cast iron, with separate sections for two pairs of cylinders. Stainless steel bellows are installed between the sections to absorb heat expansion, and the pipes are fixed by brackets. The engine exhaust gas pipes are fully covered by an insulation box. There are sensors for remote measuring of the temperature after each cylinder, and on both sides of the turbochargers.

The exhaust gas system comprises the following equipment:

- Mono-SPEX system manifold with bellows
- Flexibly mounted insulation box
- Turbine on the turbocharger
- Fresh water cleaning device for the turbine

Turbocharger and air-fuel ratio control system

To maintain a correct air-fuel ratio, the engine is equipped with an exhaust gas wastegate. It keeps the air pressure in the receiver at an optimal level to match the best power output with the emission requirements.

The exhaust gas wastegate valve by-passes the exhaust gases past the turbocharger. The wastegate valve works as a regulator and adjusts the air-fuel ratio to the correct value, independent of variations in the site conditions, such as ambient temperature, humidity and altitude.

The wastegate valve is actuated by compressed air and controlled by the engine control system.

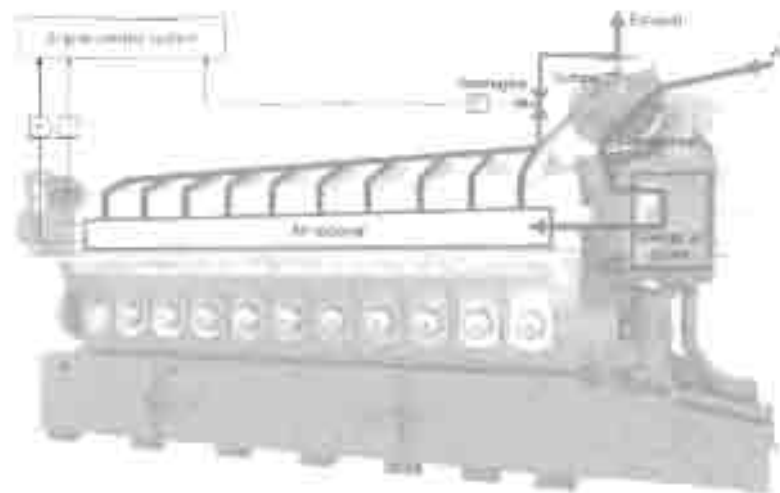


Figure 4 Illustration showing the charge air and exhaust gas system.

Wärtsilä Engine Automation

The engine automation system is a completely embedded management system. The engine control system is a distributed and bus-based system where the monitoring and control function is placed close to the point of measurement and control. In this way, both the on- and off-engine wiring is significantly simplified. Advanced diagnostics and control functions provide outstanding performance, and the need for systems outside the engine is significantly reduced.

For the field bus interconnection, Wärtsilä is committed to open standards. The physical interface of the engine control system is a standard Ethernet connection for general process data, to both the WOIS workstation (Wärtsilä Operator's Interface System) and the PLC systems. The system meets even the highest requirements on reliability, with selective redundancy and fault-tolerant design.

The gas admission duration is dynamically controlled by the internal speed controller, to obtain pre-set speed or load reference levels. The quantity of main gas admitted to each cylinder is controlled by cylinder-individual gas admission valves, which are actuated by the CCM cylinder control modules. The amount of gas admitted depends on the gas supply pressure and the time the main gas solenoid valve is open (duration).




High Pmax control strategy is the primary method to adjust the duration of cylinder-specific gas admission.

Hardware of the engine automation system

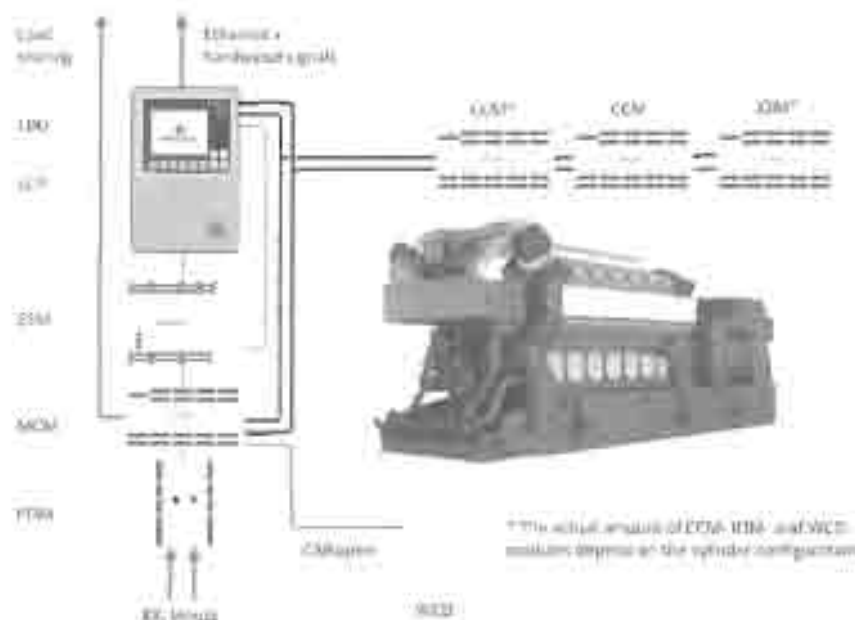


Figure 5 Hardware of the engine automation system

The engine automation system comprises the following main equipment:

- ESM safety module
- LDU graphical display for complete on-engine monitoring and communication interface to the plant automation system.
- MCM main controller for speed governing, start/stop sequencing and overall engine management
- IOM I/O modules for distributed data acquisition
- CCM cylinder control modules for injector/gas valve control and real-time diagnostics
- PDM distributes, filters, and handles fusing of power supply
- WCD ignition system module
- Sensors
- Actuators & valves

The automation system handles the following major tasks and functions:

- Local interface to the operator, including a local display which indicates all important engine measurements, an hour-counter, and a local control panel.
- Engine start/stop management, including start block handling and slow turning, load reduction, wastegate control, and the LT/HT thermostatic valve control.
- Engine safety (alarms, shut-downs, emergency stops, load reductions) including hard-wired safety for engine overspeed, lube oil pressure, cooling water temperature, and external shut-downs.
- Electronic speed/load control with various operation modes.

Sensors for alarm and monitoring

One set of sensors fitted on the engine, which are connected to the external engine control system.

Other Included Items

- Flywheel with fixing bolts
- Electric motor-driven turning device
- Counter flanges for pipe connection
- Crankcase safety relief valves with a flame trap
- The engine has one coat of priming paint and one coat of finishing paint

Engine base frame

The engine is rigidly mounted on the engine base frame. The base frame is a rigid welded steel box construction. The engine part and generator part of the common base frame is bolted together at site to form one rigid base frame.

Flexible connections between engine and external piping

To minimise the transmission of engine vibrations to the plant's piping systems, flexible hoses and bellows are provided for installation between the generating set and external piping systems.

Flexible connections are supplied for the following auxiliary systems:

- Starting/control air
- Cooling water
- Lubricating oil
- Exhaust gas
- Fuel
- Crankcase ventilation

Generator base frame

The generator is rigidly mounted on the generator base frame. The frame is made of welded steel.

The generator part and the engine part of the common base frame are bolted together on-site to form one rigid base frame.

Set steel springs

Steel spring type vibration isolation units are installed between the common base frame and the concrete foundation block. The number of steel spring units for each type of generating set is determined by the weight of the generating set and an analysis of the natural frequency of the rigid body. A fitting plate is installed between the common base frame and the steel spring packages to adjust to the level of the surface of the foundation block.

Engine maintenance platform - prefabricated

Partly prefabricated maintenance platforms are provided for easy maintenance and access to the engine. To minimise vibrations, the platforms and stairs are freestanding on the floor and not connected to the engine.

A1.2 GENERATOR**Generator - 11000 V****Generator type**

The generator is of the synchronous, three-phase, brushless, salient pole type.

Generator main data

Generator apparent power	23019	kVA
Rated power factor	0.8	
Nominal voltage	11000	V
Rated current (In)	1208	A
Voltage adjustment range	±5	%
Frequency	50	Hz
Speed	500	Rpm
Continuous short-circuit current	>2.5 x In	
Insulation class	F	
Temperature rise stator	F	
Temperature rise rotor	F	
Cooling method	Air cooled	
Enclosure	IP23	
Standard	IEC60034	

Generator construction

The generator is designed to operate together with a reciprocating engine. The stator frame is constructed with a rigid welded steel structure. The stator core is built of thin electric steel sheet laminations. The rotor consists of a shaft and salient pole type main revolving field.

The generator achieves very high efficiency because of the exceptional thermal conductivity created by the tight fit between the coils and the stator core.

Terminals

The six stator winding ends are brought to terminal boxes on the generator sides. Terminals for monitoring and auxiliary equipment have separate terminal boxes.

Damper winding

The generator is provided with a damper winding for parallel operation with other generators and with a separate power grid, if so connected.

Shaft and bearing

The generator is horizontally mounted and provided with two sleeve bearings. The generator rotor is designed to minimise the effect of torsion rotor oscillations due to system disturbances and rapid load changes.

Excitation

The exciter is of the brushless type with a rotating armature/rectifier assembled on the same shaft as the main generator rotating armature. The exciter field is controlled by the automatic voltage regulator (AVR). The rectifiers are of the silicon diode type in a full wave bridge arrangement. The rotating armature and stationary field of the exciter are insulated with Class F materials.

Cooling (air-cooled)

The generator is air-cooled. A fan mounted on the generator shaft takes cooling air from the engine hall, through washable filters, and passes it through the generator.

Automatic voltage regulator

The voltage regulator is a completely solid state type for control of generator voltage by means of controlling the exciter field. The regulator controls the generator exciter field as required to maintain a constant and stable generator output voltage. (The AVR is installed in the generating set control panel).

Voltage regulation accuracy	± 0.5	%
- within power range	0 – 100	%
- within speed range	95 – 105	%
Voltage setting range	90 – 110	%

Accessories

The following accessories are included with the generator:

6	PT-100 elements in stator windings
2	PT-100 elements for bearings
1	Anti-condensation heater
1	Voltage transformer for excitation power and measurement
1	Current transformer for measurement
3	Current transformers for protection

Flexible coupling

A flexible coupling is used between the engine flywheel and the generator which transmits the torque from the engine to the generator. By using a flexible coupling, the crankshaft is not loaded by any external bending forces. The elements in the coupling are made of radially arranged steel spring packs.

Flywheel cover

A flywheel cover is installed over the flywheel and flexible coupling to prevent access to the rotating equipment during operation.

A2

MECHANICAL AUXILIARY SYSTEMS

Proper function of the Modular power plant depends on the mechanical auxiliary systems. The proposed systems have been optimised for this particular application. The function of these systems is to provide the engine with fuel, lubricating oil, starting air, cooling water, and charge air, of the required quantity and quality, as well as to dispose of exhaust gases in a proper manner.

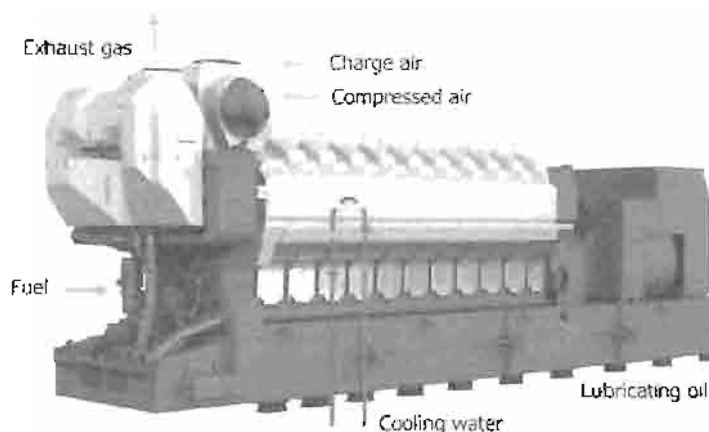


Figure 6 Mechanical auxiliary systems for the engine

A2.1

AUXILIARY MODULES

To ensure installation quality and reduce erection time, Wärtsilä has developed prefabricated auxiliary modules. These modules contain several pieces of auxiliary equipment. This saves significant pipefitting and installation time on-site. The complete module is pressure- and function-tested, then flushed, painted, and corrosion-protected prior to shipment. All external connection points are sealed and covered with steel plates.

Engine auxiliary module

The Engine auxiliary module include several pieces of auxiliary equipment (listed below), and handles the flow of lubricating oil, cooling water and compressed air to and from the engine. The Engine auxiliary module is installed in the front end of the engine with flexible pipe connections.

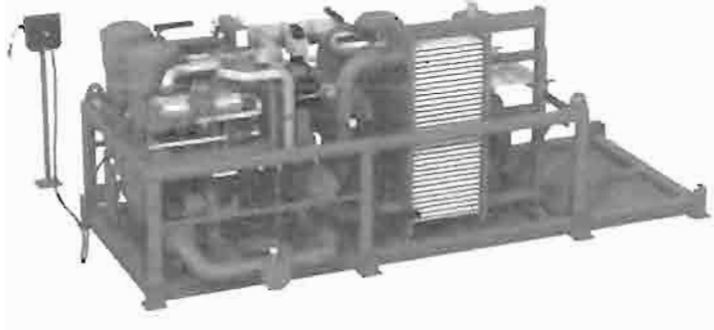


Figure 7 Example of a typical Engine auxiliary module

The Engine auxiliary module includes the following main equipment:

- 1 Turbo cleaning water supply
- 1 Lubricating oil heat exchanger
- 1 Lubricating oil automatic filter
- 1 Pre lubricating oil pump
- 1 Lubricating oil thermostatic valve
- 1 High temperature circuit preheating unit
- 1 Low temperature thermostatic valve
- 1 High temperature thermostatic valve
- 1 Auxiliary module panel
- 1 Set piping
- 1 Set valves and gauges

Exhaust gas module

The exhaust gas module includes the auxiliary equipment listed below, and handles the flow of charge air to the engine, and exhaust gas from the engine.

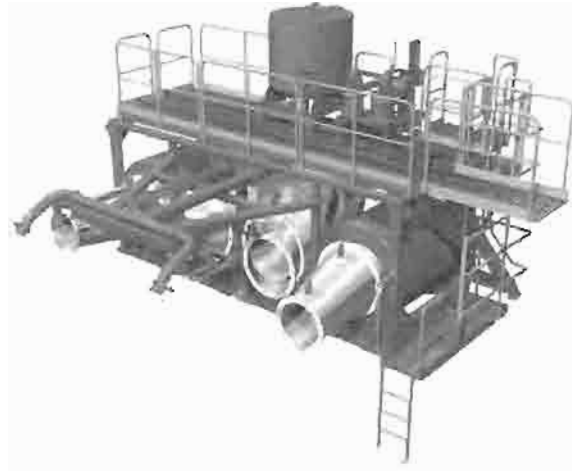


Figure 8 Illustration of a typical exhaust gas module

The exhaust gas module includes the following main equipment:

- 1 Low temperature circuit expansion vessel
- 2 Charge air silencer
- 1 Exhaust gas branch pipe
- 1 Exhaust gas ventilation fan

Pipe rack

The pipe rack connects the auxiliary systems of different generating sets to each other.

Engine auxiliary module platform

A2.2 FUEL SYSTEM

The fuel system provides the engine(s) with fuel of the correct flow, pressure and degree of purity.

A2.2.6 Gas system

The purpose of the fuel gas system is to supply the engine with a constant gas feed of suitable pressure, temperature, and cleanness. It should also shut off the gas supply if any problem arises, and provide ventilation of trapped gas.

The power plant is designed for continuous operation on gas, and the gas system is designed for the agreed project gas fuel quality specified in Section 0.4

The gas fuel system consists of the following equipment:

Main safety shut off valve - engine specific

The main safety shut off valve unit isolates the gas system in case of an emergency, and the unit is located on the gas inlet pipe outside the engine hall.

- 1 Pneumatically operated shut-off valve
- 1 Manually operated shut-off valve

Gas regulating unit

Each engine is equipped with a gas regulating unit which controls the gas feed pressure to the engine depending on the engine load. The gas regulating unit performs a leakage test of the main shut-off valves after every engine stop or shut-down. There is a separate pressure control line for the gas delivered to the prechamber.

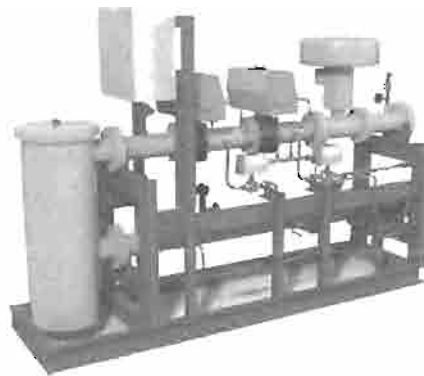


Figure 9 Example of a gas regulating unit

The following components are built onto a steel frame:

- Gas filter
- Manual and automatic vent valves
- Control valve(s)
- Instrumentation

Flow meter for gas regulating unit

The gas regulating unit is equipped with a mass flow meter. The meter has an accuracy of 0.5 % at full load.

A2.3 LUBRICATING OIL SYSTEM

The lubricating oil system provides required lubrication for all moving parts on the engine. It consists of the engine's lubricating oil system, which handles the cooling and filtration of the

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lubricating oil for the engine itself, and the plant-related lubricating oil system, which handles storage of new and used lubricating oil.

The lubricating oil system consists of the following equipment:

1 Lubricating oil transfer pump - stationary

The transfer pump unit pumps lubricating oil from the storage tank to the engines when topping up or changing oil. The transfer pumps and auxiliary equipment are built on a steel frame, which forms a compact skid unit.

The transfer pump unit consists of the following equipment.

- | | | |
|---|---|-------|
| 2 | Electric motor-driven transfer pumps | |
| | Pressure | 2 bar |
| | Single strainer on pump suction side | |
| | Thermometer on pump suction side | |
| | Local control panel | |
| | Set of interconnection pipes, flanges, seals and valves | |

Lubricating oil transfer pump mobile

The transfer pump unit pumps lubricating oil to and from the engine when topping up or changing oil, or transfers oil to and from drums as needed. The transfer pumps and auxiliary equipment are built on a wheeled dolly.

- | | | |
|---|---|-----------------------|
| 1 | Electric motor-driven transfer pump | |
| | Capacity | 8.1 m ³ /h |
| | Pressure | 2 bar |
| 1 | Single strainers on pump suction side | |
| 1 | Thermometer on pump suction side | |
| 1 | Local control panel | |
| 1 | Wheeled dolly | |
| 1 | Set of interconnection pipes, flanges, seals and valves | |






Figure 10 Example of a mobile lubricating oil transfer pump unit

Oil mist separator

Lubricating oil heat exchanger (mounted on the Engine auxiliary module)

The lubricating oil heat exchanger is of plate-and-frame type.

Lubricating oil automatic filter (mounted on the Engine auxiliary module)

The automatic lubricating oil filter is of the self-cleaning type. The cleaning is done by automatic back-flushing. The flushed oil is led to the engine sump.

Pre lubricating oil pump (mounted on the Engine auxiliary module)

Before the engine is started the complete oil system must be filled and the engine adequately primed by the pre-lubricating pump. The pre-lubricating pump is an electric motor-driven pump equipped with a built-on relief valve.

Lubricating oil thermostatic valve (mounted on the Engine auxiliary module)

The thermostatic valve controls the oil temperature to obtain the right temperature before entering the engine.

A2.4 COMPRESSED AIR SYSTEM

Compressed air is produced by a starting air compressor unit and stored in starting air bottles, while instrument air of higher quality is produced in an instrument air compressor unit.

The pressure equipment is designed, manufactured and tested according to the European Union directive 97/23/EC "Pressure Equipment Directive".

The compressed air system consists of the following equipment:

2 Instrument air compressor unit

The instrument air compressor unit produces control, instrument and working air. The compressed air is stored in the built-on air bottle until it is distributed to the different consumers.

The following components are built onto a steel frame, which forms a compact skid unit:

Electric motor-driven air compressor	
Capacity, each	162 m ³ /h
Pressure	7 bar
Compressed air receiver	
Volume	0.2 m ³
Refrigerated air dryer with control panel	
Dew point	+4 °C
Filter for removal of oil, water and particles	
Common control panel	
Set of interconnection pipes, flanges, seals and valves	

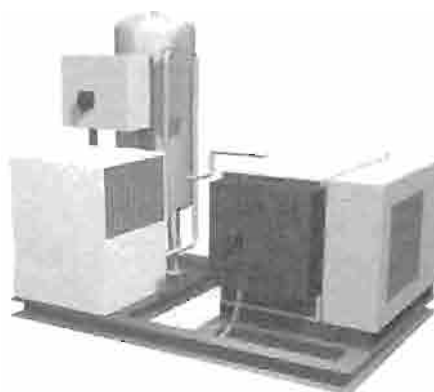


Figure 11 Example of an instrument air compressor unit

1 Starting air compressor unit - single

The starting air compressor units are sized to fill the starting air bottle(s) with the required air for 19 start attempts per total amount of engines in 60 minutes. The starting air compressor and auxiliary equipment are built on a steel frame, which forms a compact skid unit.

The starting air compressor unit consists of the following equipment:

1	Electric motor-driven air compressor	
	Capacity	185 m ³ /h
	Pressure	30 bar
	Pressure switches for starting and stopping the air compressor (24/30 bar)	
	Alarm switch for too-low starting air pressure to engine (18 bar)	
	Oil and water separators	
	Control centres for manual and automatic operation	
	Pressure reduction valves for control and working air (30/6 bar)	
	Set of interconnection pipes, flanges, seals and valves	



Figure 12 Example of a single starting air compressor unit

1 Starting air compressor unit - double

The starting air compressor units are sized to fill the starting air bottle(s) with the required air for 19 start attempts per total amount of engines in 60 minutes. One compressor is in stand-by. The starting air compressors and auxiliary equipment are built on a steel frame, which forms a compact skid unit.

The starting air compressor unit consists of the following equipment:

1	Electric motor-driven air compressors: working	
	Capacity	185 m ³ /h
	Pressure	30 bar
1	Electric motor-driven air compressor in stand-by	
	Capacity	185 m ³ /h
	Pressure	30 bar
	Pressure switches for starting and stopping the air compressor (24/30 bar)	
	Alarm switches for too-low starting air pressure to engine (18 bar)	
	Oil and water separators	
	Control centres for manual and automatic operation	
	Pressure reduction valves for control and working air (30/6 bar)	
	Set of interconnection pipes, flanges, seals and valves	

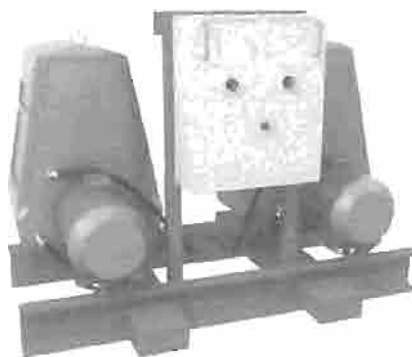
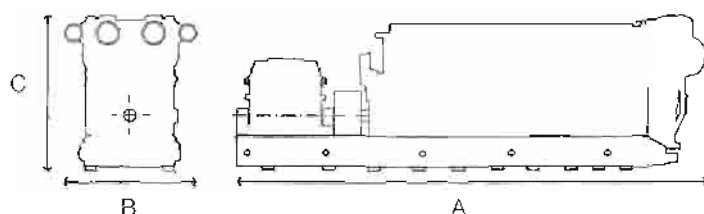


Figure 13 Example of a double starting air compressor unit

DIMENSIONS (MM) AND WEIGHTS (TONNES)

Generating set type	Length (A)	Width (B)	Height (C)	Dry weight +/- 5%	Reduced transportation weight +/- 5%
18V50SG	18781	4090	8020	365	210

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- The listed dimensions of generating set are maximum transportation dimensions, excluding the spring-mounted shock absorbers and turbocharger inlet cones for V engines.
- Generating set dry weight includes spring-mounted shock absorbers and inlet cones; excludes lube oil and cooling fluids.
- In case of limitations in maximum allowed transport weight, the generating set can be further disassembled for separate shipment of engine, generator and common baseframe.
- The listed reduced transportation weight is the weight of the heaviest of these parts.
- Please contact Wärtsilä in case transport weight needs to be further reduced.

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Aerial Photo


LIST OF BUILDINGS AND STRUCTURES

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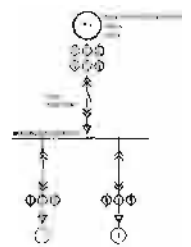
Symbol	Description
1	Existing Building
2	Proposed Building
3	Existing Road
4	Proposed Road
5	Existing Fence
6	Proposed Fence
7	Existing Wall
8	Proposed Wall

1. The symbol is used to indicate the location of the building, road, fence, wall, etc.
2. The symbol is used to indicate the location of the proposed building, road, fence, wall, etc.

 SINOPAC 中国石化集团海外工程公司 SINOPEC GROUP OVERSEAS ENGINEERING COMPANY	
 SINOPAC 中国石化集团海外工程公司 SINOPEC GROUP OVERSEAS ENGINEERING COMPANY	
PROJECT	Design Phase
APPRO	Approved
RWD	Reviewed
OMD	Checked
ISC	Issued
SCALE	1:1000
DATE	2012.10.10
DESIGNER	Design
REVISOR	Revise

- 1. The symbol is used to indicate the location of the building, road, fence, wall, etc.
- 2. The symbol is used to indicate the location of the proposed building, road, fence, wall, etc.

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New Gas Pipeline for new Rental Power Generation Plant in Kyaukse Region



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Materials list and estimated cost for 4.85 miles of a new 10 inches gas pipeline from SEAGP Off-take to the site for the power plant

Sl. No	Description	Qty		Rate (US\$)	Total (US\$)
1	10"Φ PE Coated Linepipe	7805	Meter	65.25	509276.25
2	Heat Shrinkable Sleeve	25	Rolls	331	8275
3	Closure Patches	700	Nos	1	700
4	E6011 Electrode 3.2 mm	0.118	Ton	1779	209.922
		(8 Pkt(15 kg))			
	E6011 Electrode 4.0 mm	0.354	Ton	1715	607.11
		(24 Pkt(15 kg))			
5	10" Φ Steel Ball Valve (ANSI 600 Class)	3	Set	6120	18360
6	Pipe Fittings(45°, 90°)	1	Lot	13555.5	13555.5
	TOTAL				<u>550983.782</u>

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SECTION - IV

Technical Specification for 10" ERW API 5L Grade X-42 3LPE Coated Steel Line Pipes

ITEM NO.	DESCRIPTION	UNIT	QTTY
1.	10" ERW API 5L Grade X-42 MS 3 Layer PE Coated Line Pipe (PSL 2)MTR		7810

Reference Standards

1. API 5L Specifications for Line Pipe (Latest Edition)
2. International Standard ISO 3183, 2nd Edition, Steel Pipe for Pipeline Transportation Systems
3. NACE TM 0284 : 2011
4. Hardness Testing on Parent metal, HAZ and weld Zone ASTM E92
5. Tensile Testing ASTM A370
6. PSL 2 pipe ordered for Sour Service, Annex H of ISO 3183(API 5L)

NOTE: Unless otherwise specified in this document, please follow API 5L latest edition.

1. PIPE

(a) Pipe Size

- | | | |
|----|--------------------|--------------------|
| 1. | Nominal Dia | 10 in |
| 2. | Outside Dia | 10.75 in |
| 3. | Wall Thickness | 0.438 in |
| 4. | Linear Weight | 48.28 lb/ft |
| 5. | Mill test pressure | 2910 psi (min 10s) |

(b) General Requirement

The pipes shall be furnished with plain ends beveled to an angle of 30 degrees ± 5-0 degree with a root face 1/16" ± 1/32" and shall be supplied with metallic bevel protectors and water proof cloth attached on both ends of each pipe.

(c) Usage

The Pipes shall be used in natural gas transmission pipeline for **Mild Sour Services**.

(d) Special Requirement

The Steel mill shall have the experience of manufacturing of Sour Service Steel and shall have world class laboratories itself to perform HIC test according to NACE TM 0284 in solution A or B.

HIC test certificates from the previous projects endorsed or certified by the official laboratories or Third Party Inspector must be submitted by the pipe manufacturer together with technical tender documents. Failure to submit this certificate will lead to the rejection.

2. Material

- (a) All pipes manufactured to this specification shall be made by either the basic oxygen or the electric arc furnace process, fully killed and fine grained (Grain size 9 or finer as in ASTM E 112).

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(b) Pipe steel grade shall be thermo-mechanical rolled or thermo-mechanical formed with L290 MS OR X-42 MS.

(c) Chemical Composition

All pipes shall be manufactured from steel which shall have a chemical composition ensuring proper ductility strength toughness and weld ability under all conventional welding processes and techniques.

The supplier shall provide heat analysis and carry out product analysis for all specified chemical elements. These chemical Compositions shall be included in millcertificates.

Heat and Product analysis shall meet the following requirements:

Element	max wt %
1. Carbon	0.1
2. Manganese	1.35
3. Silicon	0.45
4. Phosphorus	0.02
5. Sulphur	0.003
6. Copper	0.25
7. Niobium	0.05
8. Molybdenum	0.1
9. Chromium	0.2
10. Vanadium	0.05
11. Titanium	0.04

$$\text{Total \% of Nb+V+Ti+Cu+Mo+Cr} \leq 0.5$$

$$\text{CE}_{\text{pipe}} = \text{C} + \text{Si}/30 + \text{Mn}/20 + \text{Cu}/20 + \text{Ni}/60 + \text{Cr}/20 + \text{Mo}/15 + \text{V}/10 + 5\text{B} \leq 0.20$$

(d) Mechanical Properties

(i) Tensile Strength

The finished pipes shall meet the requirements stated in table below for tensile properties.

Steel Grade	Yield Strength (psi)	Tensile Strength (psi)	Ratio (maximum)	Elongation	Minimum Tensile Strength of Weld Seam of H/W pipe (psi)
X-42 MS	42100-71800	60200-95000	0.9	As per API 5L	60200

(ii) Hardness Test



Hardness testing on the parent metal HAZ and Welds shall be performed by using Vicker's test method in accordance with ASTM E 92 and shall be $\leq 250 \text{ HV } 10$.



(iii) HIC Test

HIC test shall be carried out before production of pipes in a medium complying with NACE TM0284, solution (A) or (B).

The test for resistance to HIC shall meet the following acceptance criteria, with each ratio being the maximum permissible average for three sections per test specimen when tested in solution (A) or (B).

- (a) Crack Sensitivity ratio (CSR) $\leq 2\%$
- (b) Crack Length ratio (CLR) $\leq 15\%$
- (c) Crack Thickness ratio (CTR) $\leq 5\%$

(iv) CVN Test

The test temperature shall be 0°C and the required minimum average absorbed energy based on full size specimens shall be 27 J for transverse specimen 41 J for longitudinal specimens.

(e) Inspection Frequencies

Sl. No.	Type of Inspection	Type of Pipe	Frequency of Inspection
1	Hardness Test	HF/W	Once per test unit of not more than 50
2	Pipe Diameter and out of roundness for pipe	HF/W	Once per test unit not more than 20 length of the pipes
3	H.I.C. Test		Once for each of the first three heats. Apply there after one test of each test unit of not more than 10 heats of steel

3. Pipe Manufacturing Process (HFERW)

Pipe shall be produced by using High Frequency Electric Resistance Welding process. The electric welding shall be performed by efficient power supply with a minimum welder frequency of 150 kHz and the weld seam and the entire HAZ shall be heat treated properly. The welding system shall have an integrated control in which the following data, as minimum shall be mentioned:

- (i) Time
- (ii) Current and Voltage
- (iii) Heat Treatment Temperature
- (iv) Welding Speed
- (v) Welding Temperature

The quality of the longitudinal weld shall be such as to produce weld joint efficiency of 1.0.

To be sure fitness and squareness of plate edges of the plates to be welded and to decrease the forming defects such as edge quality only edge forming process shall be acceptable for pipe diameter larger than 6 inch.

4. Expansion of Pipes

Pipe shall not be cold expanded for HFERW pipes.

5. Residual Magnetism

As a minimum, four readings shall be taken approximately 90° apart around the circumference of each of the pipe. The average of 4 readings shall not exceed 30 gauss and no one reading shall exceed 35 gauss when measured with a Hall-effect gauss meter.

6. Welding Procedure Qualification Test (WPQT)

WPQT test shall be conducted at mill before pipe manufacturing mentioning WPS that includes properties of welding wire, flux and how to preheat flux, % of flux reused, welding current, voltage, welding speed, gap design before welding etc.

7. Tolerances

For diameter except the end pipe (only)	$\pm 0.0075 D$
For diameter at pipe end	$\pm 0.005 D$
Out of roundness	0.015 D
Wall thickness	$\pm 0.1 t$

8. Unit Length (Fixed Length Only)

Pipes shall be supplied in length of $12.20 \text{ m} \pm 0.60 \text{ m}$.

No pipe shall be shorter than 11.6 m.

9. External Coating of Pipe

The manufactured pipe shall be coated with 3 layer polyethylene coating having total thickness 3530 microns (3.5mm) $\pm 0.1 \text{ mm}$ on pipe material and 2500 microns (2.5 mm $\pm 0.1 \text{ mm}$) on welding seam. Cut back length shall be $100 \pm 10 \text{ mm}$ between coating ends and pipe ends. After application of coatings, the finished coating shall have the following properties.

Test	Unit	Acceptance Criteria	Test Method
Tensile Strength	MPa	≥ 17	ASTM D638
Breaking Elongation	%	≥ 500	
Cathodic disbandment (24h/65 \pm 3°C/3.5 v)	mm	≤ 7 (radius)	CAN/CSA-Z 245.21-06
Impact Resistance (23 \pm 2°C)	J/mm	≥ 5	Din 30670
Holiday detection	kV	≥ 25	CAN/CSA-Z 245.21-06
Peel adhesion (20°C)	N	≥ 150	CAN/CSA-Z 245.21-06
Vicat Softening Point	°C	≥ 150	ASTM D1525
Brittleness Temperature	°C	≤ -65	ASTM D1525
Flexibility		No cracking of PE	CAN/CSA-Z 245.20-06

The coating mill shall have the laboratory to conduct on line checking and measurements. Checking of coating after 100% finishing of all pipes is unacceptable.

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10. Welding Procedure Qualification Test (WPQT) and Weldability Test

WPQT and Weldability Test shall be conducted at mill before manufacturing and strength test reports shall be submitted to tenderer.

11. Mill Certificate:

Mill certificates shall include the following:-

- (1) Pipe number with reference to heat number
- (2) Mechanical Test results and Chemical analysis including C1 (Carbon Equivalent) with reference to pipe number
- (3) Dimensional inspection
- (4) NDT performed and results
- (5) HIC Test and Results
- (6) Certificate number and date of issue.

12. Marking of Pipes

Stenciling shall be made at inside surface of both pipe ends as follows: Marking may be made in a sequence convenient to and shall include the following minimum information:

- Purchase order name
- Purchase order no.
- Steel Grade ---OD x t (Outside diameter x wall thickness)
- Heat number
- Pipe number
- Pipe length

13. Requirement of Third Party Inspection

Manufacturing process, quality control process, and manufactured products of both steel mill and pipe mill must be inspected and certified by reputable third party inspection so that the bidder's expense.

14. Right of Tenderer to Inspect Pipe Mill

(i) Before manufacturing the tenderer has the right to check and inspect quality control system and storage system of raw materials and manufacturing process of pipe and ending mill by 3 engineers (Buyer's side) at the expense of the bidder, together with 3rd party inspection team, and if it does not meet the requirements as per tender, the Buyer will cancel this tender.

(ii) While manufacturing, the tenderer also has the right to inspect daily pipe production at pipe mills by the inspection team (Buyer's side) from the start to the end of pipe production by the expense of manufacturer or bidder.

(iii) Pipe mill shall produce all pipe for the Buyer continuously. The expense for Buyer inspectors shall cover daily allowance, meals and accommodation fee.

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15. Requirement of Mill Test Certificate

Mill test certificates for mechanical and chemical properties, HIC test and NDT test results approved by third party must be sent along with manufactured pipes. Otherwise, those pipes will be rejected.

16. Required Document for Bidding

The following documents shall be contained in the bidding as a minimum:

- (a) Two sets of technical proposal, one original and one copy (With CD Soft copy)
- (b) Company Profile (Original) of manufacturer mentioning:
 - (i) Capacity of mill showing major manufacturing equipments
 - (ii) In-house capability of manufacturing both pipe and coating
 - (iii) Valid API 5L Certificate (allowed the Annex H)
 - (iv) Valid Quality Management System Certificate, ISO 9001 or DNV
- (c) Manufacturing Process showing
 - (i) Pipe manufacturing process specification and procedure for HIF ERW line
 - (ii) Coating process specification and procedures
 - (iii) Inspection and Test Plan and acceptance criteria, inspection frequencies and inspection method for both of pipe manufacturing and pipe coating.
 - (iv) HIC test procedure and sample report from previous project
- (d) Letter of Authorization (Original), duly stamped and signed, if the bidder is not the manufacturer.

17. Transportation of Pipe by Sea

- (1) The contractor shall follow API 5LW (Recommended Practice of Transportation on Barge and marine vessels).
- (2) Using of closed type container is unacceptable.
- (3) Using of top-open type container with extremely care not to damage the coating is acceptable.
- (4) It is preferable to have an owned sea port to reduce the coating defects and minimize the loading time as much as possible.

18. Pipes Transfer to Jetty

The bidder should accomplish all the pipes to arrive MOGE Jetty (Tharketa Offshore Base) without damage that will meet MOGE's acceptable conditions. These transportation costs will be borne by the bidder.



19. **Notice to the Bidders:**

- (1) The proposal shall be prepared and submitted in accordance with the requirements set forth in this document. The proposal shall be completed with documents mentioned in No. 16 above as a minimum.
- (2) The proposal must be bound and mentioned clearly section by section.
- (3) Any proposal which does not comply with the above mentioned technical specification and lack of any of the required documents shall be considered as technical failure and will be rejected.

20. **Delivery Schedule**

120 days or 4 months from the effective contract Date.

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SPECIFICATION FOR WELDING ELECTRODES(E 6011)

ITEM	DESCRIPTIONS	QTTY	UNIT
1.	<p>WELDING ELECTRODE</p> <p>Manual Arc Welding Electrodes for laying natural gas pipeline (API 5L Grade X-42 to 65)</p> <p>Electrodes conforming to AWS Class E-6011</p> <p>Brand Name Lincoln EASYARC™ ID6011</p> <p>Country of Original Indonesia</p> <p>Coating High Cellulose Electrode</p> <p>Welding Current/Position DCEP, DCEN, ALL POSITION</p> <p>Tensile Strength 62000 to 70000 psi</p> <p>Yield Strength 48000 to 64000 psi</p> <p>Elongation 22 ~ 30 %</p> <p>Charpy V-Notch Toughness 20 - 53 ft-lb at -30 deg. C</p> <p>Container Type 15 Kg easy open can (Airtight sealed metal container)</p> <p>(a) Electrode Size 3.2 mm(1 / 8 inch)</p> <p>(b) Electrode Size 4.0 mm(5 / 32 inch)</p>		
2.	<p>Delivery</p> <p>120 days from the Contract Date</p>		
3.	<p>Distribution Letter from Seller or Manufacturer</p> <p>(Mentioning together with technical information needed)</p> <p>Note:</p> <p>(a) Container must be air sealed type metal box. Paper cartons are not acceptable and then tender will be rejected.</p> <p>(b) Electrode identification and operating data (AWS number, Lincoln Label, Lincoln trademark) should be presented on every electrode.</p>		

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SPECIFICATION FOR HEAT SHRINKABLE SLEEVE AND CLOSURE PATCHES

Sl. No.	DESCRIPTION	A/U	QTY
1	<p>Heat Shrinkable Sleeve (Size 11" x 100 ft)</p> <p>To apply field joint coatings for 10" API 5L Grade X-42 3 LPE (PSL 2) linepipe girth welds having 1500 microns thickness of 3 LPE coating, cut back length of 3"(75 mm) to 4"(100 mm) for onshore applications</p> <p>Heat Shrink Sleeves: - Covalence WPC 100M</p> <p>(A) Covalence WPC 100M-11x100/1.4-1.6-RL</p> <p>(B) Specifications</p> <p>(1) Maximum Operating temperature - + 80 deg. C</p> <p>(2) Min. preheat temperature - + 90-100 deg. C</p> <p>(3) Peel strength (ASTM D-1000 Std) - 42 lb/in @ 23 deg C</p> <p>(4) Impact Resistance (ASTM G 14) - ≥ 95 in-lb</p> <p>(5) Penetration Resistance - No holiday @ 10 kV @ 65 deg C</p> <p>(6) Product Thickness - 3 mm (1.4-1.6)</p>	NMB	25 (ROLLS)
2	<p>Closure Patches (4" x 12")</p> <p>Closure patches to be used together with heat shrinkable sleeves mentioned above</p> <p>Closure Patch - Covalence WPCP</p> <p>(A) Covalence WPC 100M-1V-4 x 12</p> <p>Note:</p> <p>To provide all technical data related to the product (Brand name, model number, type, size, preheat temperature, operating temperature, procedure, etc.) clearly in the proposal document. Any proposal just copied to this tender specification will be rejected</p>	NMB	700 NOS
3	<p>Distribution Letter from Seller or Manufacturer</p> <p>(Mention together with the technical information needed)</p>		
4	<p>Delivery</p> <p>20 days from the contract date.</p>		

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SPECIFICATION FOR STEEL BALL VALVES AND PIPE FITTINGS

Sr.No.	Description	A/L	Qtrs
1	<p>API 6D Standard Steel Ball Valves (ANSI 600 Class)</p> <p>Brand Name - [KVC(UK),Cameron (USA),Bohmer (Germany) DHV(USA) Brands Only</p> <p>Country of Origin - UK / USA / Germany</p> <p>(a) Manufacturing standards</p> <p>API 6D Specification for pipeline valves</p> <p>API 607 Specification for fire testing of valves</p> <p>API 598 Valve Inspection and Test</p> <p>API Spec Q1 Specification for Quality Program</p> <p>API 617 Specification for fire test for valves</p> <p>ASME B 16.5 Steel pipe flanges and flanged fittings</p> <p>ASME B 16.10 Face to Face and End to End dimensions</p> <p>ASME B 16.23 Butt Welding Ends</p> <p>ASME B 16.34 Valves- flanged, threaded and welding ends</p> <p>NACE MR 01-75 Sulfide stress cracking resistant metallic materials for oil field equipments</p> <p>ISO 14343 Specification for pipeline valves</p> <p>ISO 9001 Quality Management System Requirements</p> <p>(b) Full Bore (Pregable valve)</p> <p>(c) Type of Construction - Trunion Mounted and three pieces bolted construction</p> <p>(d) Type of Face - Raised Face with metal woven gasket type</p> <p>(e) Valve Body Material - Carbon Steel</p> <p>(f) Body Top seal - Graphite rings</p> <p>(g) Ball - Forged steel with ENP</p> <p>(h) Stem - to be manufactured separately from the ball and in composite O Rings, Graphite Rings and Anti-static device</p> <p>(i) Operating type - Reduction Gear operated</p> <p>(j) Sealing system - Standard</p> <p>(k) Seat - Independent seats with preloaded springs</p> <p>(l) Operation type - Manual, reduction worm gear operated</p> <p>(m) Ball Position indicator - When in place on valve, the gear box valve position indicator shall be directly associated with actual stem/port position.</p> <p>(n) Face to Face dimension - Shall comply with API 6D</p> <p>(o) Contact Face Finishing - Raised Face 3/16 inch 250 AARH (6.3 micron)</p>		

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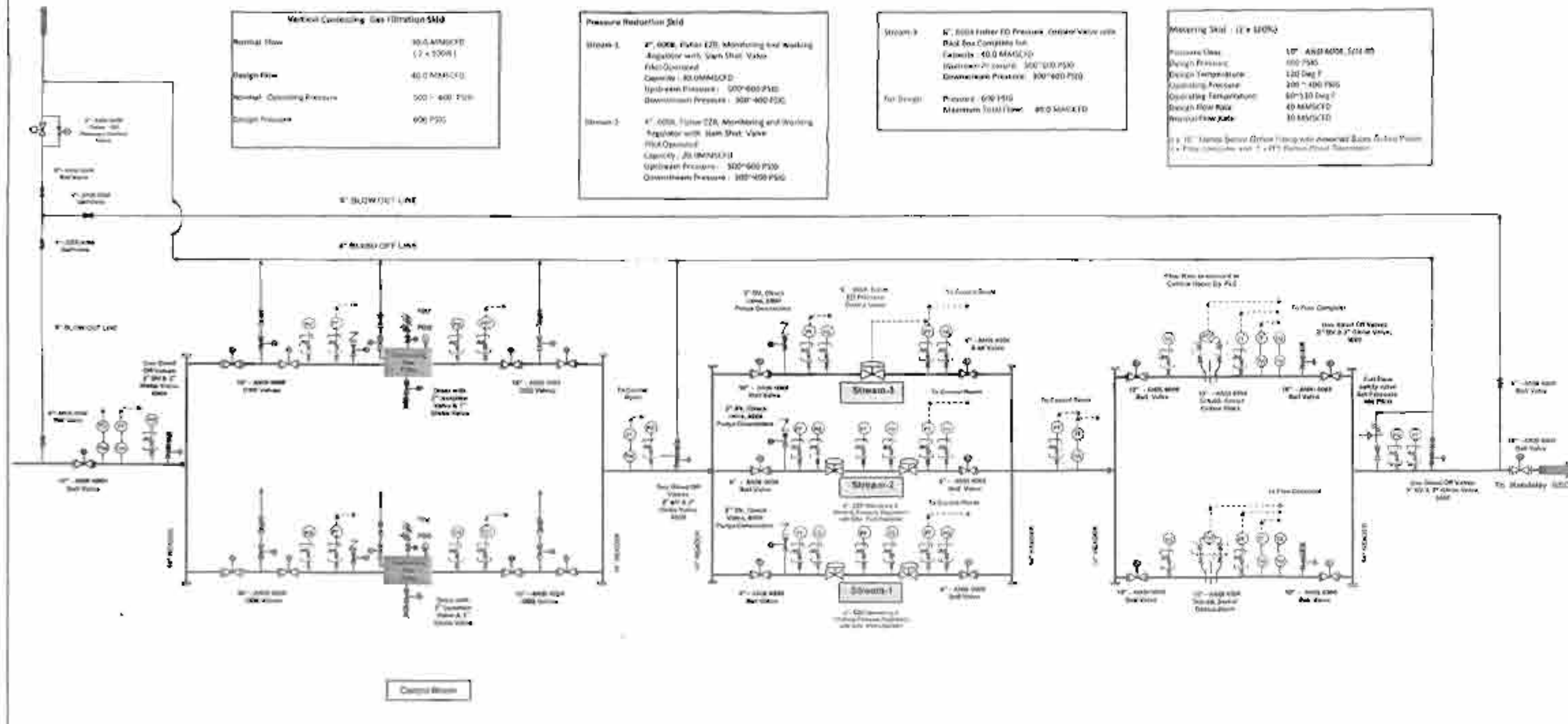
Sl. No.	Description	A/C	Qty
(pi) Inspection	- All valves must be 100% visually inspected as per API 598 and MSS SP 55.		
(q) Pressure Tests	- Shall undergo pressure tests in accordance with the requirements of API 6D and API 598. "Spot Testing" is not acceptable. High pressure gas closure test must be done.		
(r) Acceptance Criteria	- High pressure hydrostatic seat test leakage rates comply with API 6D. Leakage rate for high pressure gas closure test shall not be greater than 0.5 SCC/cm dia./ minute.		
(s) Test Certificate	- Fire test certificate according to ISO 10497-5 or API 6 FA Pressure test certificate according to API 598.		
(t) To provide the followings that must be recommended by the letter from the above mentioned Brand/Manufacturer for each ball valve-	<ul style="list-style-type: none"> 2 nos butt welding neck companion flanges 2 nos Spiral woven metal gaskets 2 sets of stud bolt and nuts for both ends with material ASTM A 193 B7 / ASTM A 194 Gr. 2H 1 no hammer type offset ring spanner 1 sets of Sealant Injection gun 6 nos. of Sealant 		
(u) DOCUMENT TO PROVIDE	<ol style="list-style-type: none"> 1. Chemical & Mechanical Material Test Certificates according to BS EN 10204 2. API Certificate 3. Fire Safe Certificate according to API 607 and API 6FA 4. Letter of Confirmation from Original Manufacturer for the statement of the Supplied Product for both Main Component as well as to all other component are brand new, free from relubrication or reconstruction or rebuild or any similar kind of actions. [Letter must address to Myanmar Oil and Gas Enterprise from Original Manufacturer] 5. If Supplier is not Manufacturer, must present Authorization letter (original) from relevant Manufacturer. 6. Warranty Documents <p>*** 1, 3, 4 & 6 with valves, 2 & 5 in bidding documents</p> <p>Note: Design, model number, drawing, and valve data sheet should be provided in proposal. Any offer just copy to MOGE tender specification will be rejected.</p>		

SPECIFICATION FOR STEEL BALL VALVE AND PIPE FITTINGS

Sl. No.	Description	A/L	Qty
1	<p>API 6.D Standard Steel Ball Valves</p> <p>Brand Name : (KVC(UK), Cameron (USA), Bohmer (Germany) DHV(USA) Brands Only</p> <p>Country of Origin : UK / USA / Germany</p> <p><u>10" Steel Ball Valves</u></p> <p>Nominal diameter : 10 inch</p> <p>Pressure rating : ANSI 600 Class</p> <p>End Connections : Flange ends, Raised Face</p> <p>Bolt holes : 16 nos for 1 1/4" stud bolts</p> <p>Note *** Each valve must be complete with companion flanges, gaskets, bolts nuts and other accessories already mentioned in above clause (1).</p>	PAR	3




Sketch Drawing



Materials list and estimated cost for Gas Filtration Skid, Pressure Control & Metering Skid

No	DESCRIPTION	QTY	UNIT	UNIT PRICE US\$	ESTIMATED COST US\$
1	Vertical Coalescing Gas Filtration Skid:	2	Sets		
	Pressure Rating: ANSI 600#				
	Inlet Pressure (Normal): 500-600 PSIG				
	Flow Rate (for one set): 30.0 MMSCFD @ 550 PSI				
	Shell Dia (OD): 32 inches, Element Model: FG-336				
	Quantity for Filter Elements of each vessel at least: 12 Nos. of 5 micron / 10 micron of Filter Cartridges				
	Filter Vessel Inlet Line				
	10" Isolation BV, Trunion Mounted, ANSI 600#, RF, WE c/w Stud Bolts & Nuts	1	set		
	Temperature Gauge with Probe & Thermowell	1	set		
	Temperature Transmitter, with Probe & Thermowell, Connect to Control room	1	set		
	0-1000 PSI Pressure gauge with 1/2" Needle valve & Bleed valve	1	set		
	Gas Bleed off Valve with 2" x one Mono block BV And 2" x one Globe Valve, ANSI 600#, RF, WE	1	set		
	Each Coalescing Gas Filter Skid consists of the following, but not limited				
	14" Inlet Header for Gas Filtration Skid	1	No		
	Filter Inlet 10" Trunion Mounted BVs Double Block & Bleeds (2 BVs & Bleed), ANSI 600#, RF, WE	1	set	350,000	350,000
	0-1000 PSI Pressure gauge with 1/2" Needle valve & Bleed valve	1	set		
	Pressure Transmitter connected to Control room	1	set		
	Purge Connection 2" BV & Check Valve				
	Coalescing Gas Filter Vessel with COC and safety interlock, c/w	1	set		
	Temperature Safety Valve (TSV) c/w isolation valve, 600#, RF, WE	1	set		
	Liquid Drain with one 2" Isolation BV and one 1" Globe Valve	1	set		
	Gas Bleed off valve with one BV and one Globe Valve, 600#, RF, WE	1	set		
	Pressure Differential Transmitter c/w instrument isolation valves connected to Control room	1	set		
	Pressure Differential Gauge c/w isolation valves	1	set		
	Filter Outlet 10" Trunion Mounted BVs Double Block & Bleeds (2 BVs & Bleed), ANSI 600#, RF, WE	1	set		
	14" Outlet Header for Gas Filtration Skid	1	No		
	Filter Vessel Outlet Line				
	Temperature Transmitter with Probe & Thermowell, Connect to control room	1	set		
	0-1000 PSI Pressure gauge with 1/2" Needle valve & Bleed valve	1	set		
	Gas Bleed off valve with one BV and one Globe Valve, 600#, RF, WE	1	set		
	Additional Spares	1	Lot		
2	Pressure Reduction Skid	1	set		
	INLET Pressure: 600-600 PSIG				
	OUTLET Pressure: 300-400 PSIG				
	14" Inlet Header for Pressure Reduction Skid	1	No		
2.a	Stream-1, Flow Capacity: 20 MMSCFD				
	Wide Open Monitoring System c/w				
	6" - ANSI 600# Trunion mounted Inlet Isolation BV, RF, WE with gasket, stud bolts & nuts	1	set		
	Purge Connection 2" BV & Check Valve, ANSI 600#	1	set		
	Pressure Transmitter connected to Control room	3	set		
	0-1000 PSI Pressure gauge with 1/2" Needle valve & Bleed valve	3	set		
	4" Emerson EZR Pilot Operated Monitor Pressure Reducing Regulator complete with pilot, filter, ANSI 600#, RF, WE c/w Pilot, to step down the pressure from 500-600 to 300-400 PSIG with Slam Shut Valve	2	sets		
	Pilot & Pilot Springs, Main Diaphragm as spare	2	sets each		
	6" - ANSI 600# Trunion mounted Outlet Isolation BV, RF, WE with gasket, stud bolts & nuts	1	set		
2.b	Stream-2, Flow Capacity: 20 MMSCFD				
	Wide Open Monitoring System c/w				
	6" - ANSI 600# Trunion mounted Inlet Isolation BV, RF, WE with gasket, stud bolts & nuts	1	set		
	Purge Connection 2" BV & Check Valve, ANSI 600#	1	set		
	Pressure Transmitter connected to Control room	3	set	500,000	500,000
	0-1000 PSI Pressure gauge with 1/2" Needle valve & Bleed valve	3	set		
	4" Emerson EZR Pilot Operated Monitor Pressure Reducing Regulator complete with pilot, filter, ANSI 600#, RF, WE c/w Pilot, to step down the pressure from 500-600 to 300-400 PSIG with Slam Shut Valve	2	sets		
	Pilot & Pilot Springs, Main Diaphragm as spare	2	sets each		
	6" - ANSI 600# Trunion mounted Outlet Isolation BV, RF, WE with gasket, stud bolts & nuts	1	set		
2.c	Stream-3, Flow Capacity: 30 MMSCFD				
	10" - ANSI 600# Trunion mounted Inlet Isolation BV, RF, WE with gasket, stud bolts & nuts	1	set		
	Purge Connection 2" BV & Check Valve, ANSI 600#	1	set		
	Pressure Transmitter connected to Flow Transmitter Control room	2	sets		
	0-1000 PSI Pressure gauge with 1/2" Needle valve & Bleed valve	2	set		
	6" Fisher Type ED, Pressure Control Valve with Pilot Box Complete set, ANSI 600#, RF, RTJ, WE c/w	1	set		
	Pressure Regulator with gasket, stud bolts & nuts				
	10" - ANSI 600# Trunion mounted Inlet Isolation BV, RF, WE with gasket, stud bolts & nuts	1	set		
	14" Outlet Header for Pressure Reduction Skid	1	No		
2.d	Pressure Reduction Outlet Line c/w				
	Pressure Transmitter connected to Flow Transmitter connected to Control room	1	set		
	Temperature Probe, Thermowell & Temperature Transmitter connected to Control Room	1	set		

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No	DESCRIPTION	QTTY	UNIT	UNIT PRICE US\$	ESTIMATED COST US\$
3	Metering Skid, Flow Capacity: 40 MMG/GPD (2 x 100%)	2	Streams		
	- 14" Inlet Header for Metering Skid	1	No		
	Each Metering Stream consists of the followings, but not limited				
	- 10" - ANSI 600#, Inlet Isolation BV, FB, RF, WE, with gasket, stud bolts & nuts	1	set		
	- 10" Meter Tube with straighten vanes	1	set		
	- 0-1000 PSI Pressure gauge with 1/2" Needle valve & Bleed valve	1	set		
	- Pressure Transmitter connected to Flow Transmitter Control room	1	set		
	- Pressure Differential Transmitter connected to Flow Transmitter Control room	1	set		
	- 10" - ANSI 600# Dual Chamber Senior Orifice Fitting, SCH 80, Both Flange End, RF or RTJ, c/w 13 Nos. assorted size SS Orifice plate: (4.00", 4.25", 4.50", 4.75", 5.00", 5.25", 5.50", 5.75", 6.00", 6.25", 6.50", 6.75", 7.00"), 316 SS - Five Sets of Orifice Plate Seal "SS" Dual Seal Plate	1	set		
	- Temperature Transmitter, with Probe & Thermowell, Connect to Control room	1	set		
	- Temperature Gauge, with Probe & Thermowell	1	set		
	- Gas Bleed off line with one 2" BV and 2" Globe Valve, 600#, RF, WE, To Common Vent Line	1	set		
	- 10" - ANSI 600#, Inlet Isolation BV, FB, RF, WE, with gasket, stud bolts & nuts	1	set		
	- 14" Outlet Header for Metering Skid	1	No		
				400,000	400,000
3.1	Flow measurement system c/w				
	- Flow Computer				
	- RTU, Hourly Report / Daily Report / Print Out				
	- License Software & configuration				
	- Calibration tools / Equipments & Onsite Training				
	- Cable Connection, Data Transfer from flow transmitter to Control Room				
	- Deck Stop Computer, Display Face Plate and Printer with license software / UPS, etc.				
	- Laptop Computer with license software				
3.2	Meter Outlet Line				
	- Full flow Safety Valve with upstream Isolation valve 600# x 300# with gasket, stud bolts & nuts, Set Pressure 400 PSIG	1	set		
	- 0-1000 PSI Pressure gauge with 1/2" Needle valve & Bleed valve	1	set		
	- Pressure Transmitter connected to Flow Transmitter Control room	1	set		
	- Gas Bleed off line with 2" BV and 2" Globe Valve, 600#, RF, WE, To Common Vent Line	1	set		
	- 10" - ANSI 600#, Inlet Isolation BV, FB, RF, WE with Stud Bolts & Nuts with gasket	1	set		
	Spares	1	No ea		
4	Accessories				
4.1	10" - ANSI 600# BV, Trunnion mounted, FB, RF c/w mating flanges, gaskets, stud bolts & nuts (for Filtration Skid)	1	set	13500	13500
4.2	10" - ANSI 600# BV, Trunnion mounted, FB, RF c/w mating flanges, gaskets, stud bolts & nuts (for Pressure Skid)	1	set	13500	13500
4.3	10" - ANSI 600# BV, Trunnion mounted, FB, RF c/w mating flanges, gaskets, stud bolts & nuts (for Metering Skid)	1	set	13500	13500
4.4	2" x 600# BV, RB, RF, WE c/w Gaskets, stud bolts & Nuts	2	set	800	1600
4.5	2" x 600# GLV, RB, RF, WE c/w Gaskets, stud bolts & Nuts	2	set	900	1800
4.6	1" x 600# BV, RB, RF, WE c/w Gaskets, stud bolts & Nuts	2	set	450	900
4.7	1" x 600# GLV, RB, RF, WE c/w Gaskets, stud bolts & Nuts	2	set	450	900
4.8	10" x 6" Concentric Reducer Sch-80, Plain End, Steel- Butt Welding	2	Nos	120	240
4.9	10" x 4" Concentric Reducer Sch-80, Plain End, Steel- Butt Welding	2	Nos	100	200
4.10	4" x 2" Concentric Reducer Sch-80, Plain End, Steel- Butt Welding	2	Nos	30	60
4.11	2" x 1" Concentric Reducer Sch-80, Plain End, Steel- Butt Welding	5	Nos	15	75
4.12	10" 90 Deg Elbow, Sch-80	5	Nos	200	1000
4.13	6" 90 Deg Elbow, Sch-80	2	Nos	50	100
4.14	4" 90 Deg Elbow, Sch-80	2	Nos	40	80
4.15	2" 90 Deg Elbow, Sch-80	3	Nos	25	75
4.16	6" x 4 Reducing Tee, Sch-80	5	Nos	100	500
4.17	2" Equal Tee, Sch-80	5	Nos	50	250
4.18	6" x 600# Companion Flanges, Stud Bolts & Nuts, Gaskets (2 Nos of Flanges)	1	set	350	350
4.19	4" x 600# Companion Flanges, Stud Bolts & Nuts, Gaskets (2 Nos of Flanges)	1	set	300	300
4.20	2" x 600# Companion Flanges, Stud Bolts & Nuts, Gaskets (2 Nos of Flanges)	1	set	200	200
4.21	3 Pens IIT Barton Chart Recorders & accessories with 2 Nos. of Chart Drive, 50 Pkg of Chart & Spares	2	sets	10000	20000
4.22	1/2" Instrument Double Block & Bleed	5	Set	400	2000
4.23	0-1000 PSI Pressure Gauge	3	Set	125	375
4.24	1/2" Needle Valve x 6000 PSI	3	Nos	80	270
4.25	1/4" Needle Valve x 6000 PSI	3	Nos	75	225
4.26	1/4" Type 1301 F Direct Operated Pressure Reducing Fisher Regulator, Inlet Pr. 8000, Outlet Pr. 10 - 225 PSIG, NPT	1	No	1000	1000
4.27	1/2 Inch OD, Minimum 6000 PSI Rating SS Tube	50	meter	60	3000
4.28	1/2" SS Compression Fittings, Elbow, Tee, Union & Coupling	5 Nos Each		50	1000
4.29	SS Tube Binding Machine & Accessories, Ecolina Brand, MEGT Bender A/T .070 or Equivalent	1	set	1000	1000
4.30	High Pressure Grease Gun with connections and accessories for valve greasing	1	set	300	300
6	Blow Out Line and Bleed Off Line System				
6.1	8" Line Pipe, ERW, Sch-80, API 5L Grade B (PSL-2), Steel Line Pipe	500	Ft	50	25000
6.2	4" Line Pipe, ERW, Sch-80, API 5L Grade B (PSL-2), Steel Line Pipe	400	Ft	50	20000
6.3	2" Line Pipe, ERW, Sch-80, API 5L Grade B (PSL-2), Steel Line Pipe	200	Ft	50	10000
6.4	5" ANSI 600#, BV, Trunnion Mounted, RF, WE c/w Stud Bolts & Nuts	6	sets	3000	18000
6.5	4" ANSI 600#, BV, Trunnion Mounted, RF, WE c/w Stud Bolts & Nuts	3	sets	2000	6000
6.6	2" ANSI 600#, BV, RB, RF, WE c/w Stud Bolts & Nuts	6	sets	450	2700
6.7	4" 600# Fisher ED Pressure Control Valve with Pilot Box Complete Set	1	set	20000	20000
					1,429,800

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1,429,800

APPROVED VENDOR LIST

Vendors at attached table have been approved by MOGE. The list is to be used as applicable by the CONTRACTORS/SUPPLIERS in accordance with the following criteria;

MOGE will take into consideration all Technical Queries, issued by CONTRACTOR, but MOGE reserves the right to reject, at its sole discretion such queries.

Discipline	Type of Equipment	Manufactures
Vessel	Filter Vessel	Peco Facet, PERRY, FLASH POINT, PEERLESS, OAKWELL, HYUNDAI, TOE
Cartridge	Gas Filter Cartridge	PEERLESS, PeCO, PALL, FRAM
Piping valves	Ball Valve, OPSO	KVC, Fiorentini, Cameron, Tyco, Tormene, DEMCO, Fukuyama, FMC, Neway, KTM, Bhoma, Cooper, Teer
Piping Valves	Globe Valve	KVC, Fiorentini, Cameron, Tyco, Tormene, DEMCO, Fukuyama, FMC, Neway, KTM, Bhoma, Cooper, Teer
Piping Valves	Pressure Safety Valve (PSV)	Sarasin, Kunkle, Hydroseal, Faris, Leser
Piping Valves	Control Valve, Regulator, OPSO	Emerson-Fisher, RMG, CVS, Fiorentini, Norriseal, Masonellian, Gascot
Instrument	Flow Measurement Orifice fittings and Plate	Emerson-Daniel, Canalta, TMCQ, FMC, Krohne, Elster, ABB
Instrument	3 Pen Chart Recorder	BARTON, Cameron
Instrument	Pressure Gauges	WIKA, Bourdon, Aschroft, ROTOTHERM, NUOVA FIMA
Instrument	1/4" and 1/2" Needle Valve	Parker, Kerotest/Marsh, Reforge, SACCAP, Oliver, Swagelok
Instrument	Transmitters/ Thermo well	Emerson-Rosemount/Yokogawa/Foxboro/ ROTOTHERM, ABB, Krohne
Operation Control	Flow Computer	OMINI, FlowBoss, Yokogawa, Krohne, Siemen, ABB, Elster
	SCADA System	Emerson/Fisher Delta V, Yokogawa, Siemen, Krohne, Schneider

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GAS COMPOSITION FOR DESIGN

COMPONENT	MOLE % (Normalized Value)
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METHANE	99.58822
ETHANE	0.09139
PROPANE	0.02234
I-BUTANE	0.00879
N-BUTANE	0.00211
N-PENTANE	0.00000
I-PENTANE	0.00335
N ₂	0.17273
CO ₂	0.09805
C ₆ +	0.01067
H ₂ O	0.00234
H ₂ S	0.00001
TOTAL	100.0000

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APPENDIX

FUNDAMENTAL SPECIFICATIONS

BALL VALVE

- (i) Valves shall be ball type and the valve body shall comply with the requirements for isolation valves and be of the same ANSI class of the line in which the valve is installed.
- (ii) Ball valves shall be manufactured and tested in accordance with the requirements of API 6 D for 2 inch and above and BS 5351 for sizes below 2 inch. Globe valve shall be manufactured and tested in accordance with BS 1873.
- (iii) Valve body design with threaded joints will not be acceptable.
- (iv) Valves shall have double block and bleed feature to facilitate complete flushing, draining and venting of the valve body cavity with valve in fully open or fully closed condition.
- (v) Locking devices shall be provided to accept padlocks, wherever applicable.
- (vi) **Ball** shall be made by forging or casting. Stem shall be fabricated from forging only. Carbon steel/ Low alloy steel ball and stem shall have 0.003 inch electro less nickel plating with a minimum hardness of Rockwell - C65. Chromium plating on ball and stem is not permitted.
- (vii) Carbon steel / low alloy steel **seat rings** shall have 0.003 inch electro less nickel plating with a minimum hardness of Rockwell - C50.
- (viii) Valves having body, bonnet, cover and / or end flanges made of cast iron or ductile iron are not acceptable.
- (ix) For valves of ANSI 600 all elastomeric seal materials used shall be resistant to explosive decompression.
- (x) Minimum Hydrotest duration for shell test shall be 15 minutes for sizes up to and including DN 250.
- (xi) Seat test duration shall be 5 minutes for all sizes.

BALL VALVE DATA (Not Limited to)

NORMAL VALVE SIZE	2" ~ 12"
BODY CONSTRUCTION	3 Pieces Side Entry Design
OPERATING TEMP	60 ~ 120 Deg F
DESIGN TEMP.	-29 to 100 Deg C
GEAR/LEVER	Gear Operated > 6 inch BV

DESIGN	API 6D, ASME B 16-34 Trunnion Mounted ≥ 2 inch Floating Ball < 2 inch Fire Safe Design Antistatic feature
BORE TYPE	RB for all pipe line valves, FB only for Meter Tube Isolation valves
FACE TO FACE END	API 6D, ASME B16.10 RTJ/RF, FLANGE ; ASME B16.5 ("SMOOTH FINISH" FACING)
SERVICE CLASS	B

MATERIALS OF PARTS

BODY	A105 / A216 WCB, ASTM A 350 LF2 / LF6
BONNET	A105 / A216 WCB
BALL	A105ENP(+0.003" ENP, A350 LF2 / AISI 4140+0.003" ENP
STEM	A 182, AISI 316, A 350 LF2 / AISI 4140 + 0.003 ENP
SEAT	A105+ENP, A182 (F316), Spring Energized, Nylon, PEEK
SEAT/STEM O -RING(SEAL)	HNBR / VITON(FKM) AED, Elast-O-Lion 985
SEAT SPRING	Inconel X 750
BOLTINGS	A 193 B7/A 194 2H/A 320 Gr L7M Zinc Plated Bichromated
TRUNNION	A276-304
TRUNNION BEARING	304 +PTFE
FLANGES	A105
Gaskets	Spiral wound, graphite filler,

GLOBE VALVE , REDUCED BORE

2 Inch & Greater

BODY	A105 / A216 WCB,
BONNET	ASTM A216 Gr.WCB
STEM	ASTM A 276 Gr 410
SEAT RING	BS 970 070M20 OR ASTM A 106B + 13% chrome steel
DISC	BS 970 070M20 + 13% chrome steel faced
DISC NUT	ASTM A276 Gr.410
GLAND PACKING	Flexible Graphite rings intermediate with Non-Asbestos braided filament ring
BOLTINGS	A 193 B7/A 194 2H/A 320 Gr L7M Zinc Plated Bichromated
VALVE DESIGN	Long Pattern, Outside screw, and yoke (OS & Y), rising stem, swivel plug disc, removable seat, BB

< 2 Inch (800#,1500#)

BODY	SW, A 182 , SW , A 105,
STEM	F316 L, Stellite coated, OS & Y, BB
WEDGE/DISCA SEAT (SWIVEL PLUG DISC)	HARD FACED OVERLAYED WITH STELLITE COATED
REMAIN PARTS	SEE TM BALL VALVE (ABOVE)

PILOT OPERATED REGULATOR

- (i) Regulator shall be designed as per DIN 3380.
- (II) All Regulators shall comply with EN 334 (Type Test Certificates are required).
- (iii) Regulator shall be pilot operated self actuated through line gas.
- (iv) Pressure regulators shall preferably be axial type.
- (v) End connections shall be RF flanged.
- (vi) Limit switches shall be provided to indicate open and close positions.
- (vii) The valve shall be designed to control the outlet pressure.
- (viii) Regulator shall be sized to deliver the maximum flow at minimum pressure condition and the minimum flow at the maximum pressure condition. Noise calculations shall be furnished accordingly by Vendor. Pressure drop across the regulator for purpose of sizing etc. Shall be taken as per the conditions specified in the relevant datasheets.
- (ix) The maximum increase of the downstream pressure or "closing overpressure" shall not exceed 5% of the set pressure.
- (x) It shall be possible to modify the nominal flow by changing easily the internal restriction pieces of the valves.
- (xi) Set points shall be adjustable. Vendor shall furnish the adjustable range of the pilots.
- (xii) Control range shall be sufficient to cover the required set pressure limits.
- (xiii) The accuracy of the regulated outlet pressure shall be +/- 2.5% of the set pressure for a flow varying from 10% to 100 %
- (xiv) The seat leakage classification shall be Class IV according

to ANSI B 16.104.

- DIN 3381 Safety devices for gas supply installations operating at working pressures up to 100 bar ; pressure relief governors and safety shut-off devices
- EN 12186 Gas supply systems - Gas Pressure Regulating stations for transmission and distribution - Functional requirements
- EN 14382 Safety devices for gas pressure regulating stations and installations
- EN 334 Gas pressure regulation - Inlet pressure up to 100 bar
- ISO 2186 Fluid Flow in Closed Conduits - Connections for Pressure Signal Transmissions between Primary and Secondary Elements
- IS 800:1984 & IS2062:1999 Skid Fabrication and Construction.

REGULATOR DATA

REGULATOR TYPE	EZR OR EQUIVALENT
BODY STYLE	GLOBE
BODY MATERIAL	A 216 WCB/WCC STEEL
CAGE	STAINLESS STEEL
SPRING	STAINLESS STEEL
BACKUP RINGS	TEFLON / PIPE
BONNET	ASTM A 350 gr LF 2
END CONNECTION	CLASS 300, RF FLANGE WITH COMPANION FLANGE
	GASKETS , STUD BOLTS & NUTS
DIAPHRAGM MATERIAL	17 E 97 NITRIL(NBR) (0-150)deg F,
MAIN VALVE, MAIN SPRING	BLACK < 500 PSIG OR EQUIVALENT
CAPACITY	100 %
TRAVEL INDICATOR	YES
INLET STRAINER	YES S 31600 STAINLESS STEEL
INLET-BODY TAP	No
PRE-PIPE INLET	YES

PILOT FOR WORKING AND MONITORING REGULATOR

PILOT TYPE	161 EB/PRX Series OR EQUIVALENT
PILOT BODY /SPRING CASE	CF 8 M/SST
PILOT SPRING RANGE	AS per Tender Requirement
DIAPHRAGM	NITRILE (NBR)
O-RING	NITRILE (NBR)
RESTRICTOR	TYPE 112 SST

PRESSURE CONTROL VALVE

- (i) The Control valve shall preferably be of globe type considering throttling service at high velocity gas flow

- ii) Actuator shall be pneumatic (gas /air operated)and of "FAIL - OPEN or FAIL-CLOSE" type as per tender requirement.
- iii) Control valve shall be sized to deliver the maximum flow at minimum pressure condition and the minimum flow at the maximum pressure condition. Noise calculations shall be furnished accordingly by Vendor . Pressure drop across the valve for purpose of sizing etc. shall be taken as per the conditions specified in the relevant datasheets.
- iv) Limit switches shall be provided to indicate open and close positions.
- v) The maximal increase of the downstream pressure or "closing overpressure " shall not exceed 5% of the set pressure.
- vi) It shall be possible to modify the nominal flow by changing easily the internal restriction pieces of the valves.
- vii) The accuracy of the regulated outlet pressure shall be $\pm 25\%$ of the set pressure for a flow varying from 3% to 100%
- viii) The seat leakage classification shall be Class IV according to ANSI B 16.104.
- ix) Control range shall be between 10 % and 90% of valves travel range.
- x) DRY gas is expected , which will be used for valve actuation. However vendor shall incorporate gas filtration arrangement before supplying to the actuator , for better reliability.
- x:) Vendor need to calculate the controller downstream temperature and support to MOGE for downstream piping material selection.
- ANSI B 16.104 & FCI 70-2 Control Valve Seat Leakage
 - ASME B 16.5 Steel Pipe Flanges and Flanged Fittings
 - ANSI B 16.36 Steel Orifice Flanges
 - ANSI B 16.37, API 598 Hydrostatic Testing of Control Valves
 - ISA S 75.1 Flow Equations for Sizing Control Valves
 - ANSI/ISA S75.06 Control Valve Manifolds
 - API 6D Pipeline Valves, End Closures, Connectors and Swivels
 - API 6FA Specification for Fire Test of Valves
 - API 598 Valve Inspection and Testing
 - BS 5155 Butterfly Valves
 - BS 5351 Steel Ball Valves
 - BS 6364 Valves for Cryogenic Service
 - BS 6755 Pt 1&2 Testing of Valves
 - ISA S75.01 Flow Equations for Sizing Control Valves
 - ISA S75.03 Face-To-Face Dimensions for Flanged Globe Style Control Valves

PRESSURE CONTROL VALVE DATA

PRESSURE RATING	900#, 600#, 300#
BODY TYPE	GLOBE,
BODY MATERIAL	ASTM A 216 WCB/WCC STEEL ,CF 8 M
CAGE(TRIM) MATERIAL	S 174000(17-4PH SST) H-900,Whisper Trim
VALVE PLUG MATERIAL	S416000(HARDENED 416SST)
	S 316000(316 SS)with CoCr-A hard facing on Seat & Guide
SEAT RING	S 41600/S31600 with CoCr-A on seat
PORT SIZE	As Per Vendor Design
SHUT OFF CLASS	IV For 900#,III For 600# & II For 300#
PACKING	PTFE
ACTUATOR	SPRING & DIAPHRAGM TYPE 657,667 Series
DIAPHRAGM	NITRIL/SILICONE ELASTOMER
ACTION	As per Tender
END	RF/RTJ WITH MATING FLANGES,GASKETS, STUD BOLTS & NUTS FOR BOTH ENDS
FLANGES	TO BE CUT BEVELLED FOR BUTT WELDING ENDS
POSITIONER	C1 OR 4150K/4160K Series Wizard II PNEUMATIC PRESSURE CONTROLLER (Gauge Pressure), PNEUMATIC SIGNAL(3-15PSIG), SST BOURDON TUBE AND 67 AER REGULATOR, YOKE MOUNTED ON CONTROL VALVE ACTUATOR

BOURDON TUBE PRESSURE RATING TO BE SELECTED AFTER LIAISE WITH PURCHASER

FISHER TYPE 1301F SERIES PRESSURE REDUCING REGULATOR

MAXIMUM INLET PRESSURE	6000 PSIG
OUTLET PRESSURE RANGE	100-225 PSIG
CONNECTION	1/4" NPT FEMALE
NORMAL OPERATING TEMPERATURE	20 TO 150 DEG F
VALVE DISK	PTFE
GASKET	EPDM
BODY/ORIFICE	316,SS
NACE	YES

ORIFICE METER RUN

The Complete Orifice Meter Run consists of the meter tube, sensor orifice fitting and the necessary straight run piping. The meter run will be installed outdoors.

Design Data; The orifice meter shall be designed in accordance with AGA-3 latest version. Strength Calculation shall be in accordance with the requirements of the ASME B 31.8 Guide for Gas Transmission & Distribution Piping Systems.

Meter Tube; Meter tube Inside Diameter, tolerances and roughness shall be determined and recorded. Values shall be within limits of AGA-3.Piping

upstream & Downstream orifice Runs shall be in accordance with AGA-3 for d/D (Beta) ratio of 0.7.

Senior Orifice Fitting; The orifice fitting shall allow for exchange of the orifice without interrupting the flow through one meter run (Orifice meter to be provided with plate carrier to protect orifice plate). The fitting shall be furnished with welding neck RF Companion flanges, RF gaskets, Stud Bolts & Nuts for both ends.

Orifice Plates; The Orifice shall be made of stainless steel ANSI 316 Orifice dimensions D and d as per AGA-3 shall be permanently marked at the circumference of the orifice.

SENIOR ORIFICE FITTINGS

- DANIEL CAT 103 ' DS ' SENIOR ORIFICE FITTINGS, Or EQUIVALENT
- CARBON STEEL BODY
- STANDARD STAINLESS STEEL TRIM,
- ONE PCE " DS " (DUAL SEAL) FOR ORIFICE PLATE SEALING.
- TO SUPPLY WITH WELDING NECK RF COMPANION FLANGES, RF GASKETS, STUD BOLTS AND NUTS FOR BOTH ENDS
- DANIEL CAT , 500 UNIVERSAL SPARE ORIFICE PLATES 316 SS ,
1/8" Thickness

THREE PEN BARTON CHART RECORDER (GAS FLOW METER)

Compleat with instrument inlet, outlet piping / valves / vent

HOUSING MATERIAL	CARBON STEEL (OR) FORGED STEEL
SWP	199 DPU, 2500 PSI
BELLOW	316 SS
SPRING	INCONEL/SS
CHART DRIVE	24 HRS / 7 DAYS , DUAL MECH
STATIC PRESSURE	0-1000 PSI
DIFFERENTIAL PRESSURE	0 - 200 " WOG
TEMPERATURE	0 - 150 (DEGREE - F)
CONNECTION	1/2" NPT TOP X 1/4" NPT BOTTOM WITH THREE VALVES MANIFOLD. 10 FT OF SS ARMoured CAPILLARY AND 4" SS THERMOWELL
MOUNTING	2" PIPE SLIP ON MOUNTING
WINDOW	GLASS

PRESSURE SAFETY RELIEF VALVE / RELIEF VALVE

- (i) PSV shall be soft seated , preferably conventional type. In case service conditions require pilot operated valves then pilot shall be non-flowing type and shall be designed failsafe.
- (ii) Relief valves shall be carbon steel with stainless steel trim as minimum and aluminized carbon steel (suitable for the fluid) springs shall be used.
- (iii) Safety valves sizing and selection shall be in accordance

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with API RP 520 , API RP 521 , API RP 526 and Section I and VII of the ASME boiler and Pressure Vessel Code.

- (iv) PSV to be sized for "blocked discharge" condition.
- (v) Vendor to provide maximum allowable back pressure with restricting capacity. To install RO by the design requirement.
- (vi) A connection for field test shall be provided.
- (vii) Seat tightness shall meet the requirement specified in API 527.

Creep Relief Valves (CRV)

- (i) CRV shall be soft seated and of conventional type.
- (ii) Relief valves shall be carbon steel with stainless steel trim as minimum and aluminized carbon steel (suitable for the fluid) springs shall be used.
- (iii) Sizing and selection shall be in accordance with API RP 520 , API RP 521 , API RP 526 and Section I and VII of the ASME boiler and Pressure Vessel Code.
- (iv) CRV to be sized for "Creep relief" condition when the valve passed under closed conditions.
- (v) Vendor to provide maximum allowable back pressure with restricting capacity ,
- (vi) A connection for field test shall be provided.
- (vii) Seat tightness shall meet the requirement specified in API 527.

- API RP 520 Pt 142 Sizing, Selection and Installation of Pressure Relieving Systems in Refineries
- API RP 521 Guide for Pressure Relieving and Depressurizing Systems
- API 526 Flanged Steel Safety Relief Valves
- API 527 Commercial Seat Tightness of Safety Relief Valves with Metal-To-Metal Seat
- API 2000 Venting Atmospheric and Low-Pressure Storage Tanks
- ANSI/ISA S 75.06 Control Valve Manifolds
- ISO 6718 Bursting Discs and Bursting Discs Devices

SAFETY VALVE DATA

BODY	A216 WCB, CF 8M
BALL	STELLITE
SEAT	316 SS
BODY SEAT/CAP SEAL	HNER/VITON(FKM)

O-RING	HNBR/VITON(FKM)
SPRING	316 SS/INCONEL
TYPE	CONVENTIONAL SPRING LOADED TYPE FOR FAST OPENING
USAG	NATURAL GAS FLOW LINES AND OIL & GAS SEPARATOR,

NOTE

ORIFICE SIZE SHOULD BE ALLOWABLE MAXIMUM SIZE (.)
 PRESSURE SETTING MUST BE FIELD ADJUSTABLE (.)

NEEDLE VALVES

PRESSURE RATING	WP As Per Tender,
BODY	A 105 /A 479 SS 316 ,
BORE	REDUCED BORE/STRAIGHT TYPE
SEAT	METAL TO METAL
STEM	SS 316/
GLAND PACKING	PTFE / VITON /GRAPHOIL
END CONNECTION	1/2" NPT FEMALE X FEMALE ENDS 1/4" NPT FEMALE X FEMALE ENDS
	ZERO LEAKAGE
FINISH	CS ZINC PLATED & DICHROMATED.

Field Instruments

- i) The field instrument comprising gauges, transmitters, RTD etc. shall be selected in accordance with the specified process and project requirements .The instruments shall only be procured from the vendors approved by the purchaser.
- ii) The pressure instruments shall be provided with individual process isolation valves and block and bleed manifolds.
- iii) The pressure transmitters shall be SMART type with 4-20 mA DC two wire outputs,24 VDC loop powered ,and 316 SS construction complete with local output meter (LCD type).
- iv) The temperature transmitters shall be Pt 100 RTD sensor type with integral head mounted SMART transmitter with two wire 4-20 mA DC output ,24 VDC loop powered complete with local output meter (LOC type). The temperature transmitter shall be provided with flanged thermo well of 316SS material fabricated from drilled bar stock.
- v) Pressure gauges shall be of 150 mm dial safety pattern type with blow out back. Material of construction shall be 316 SS for both internal and casing.
- vi) Temperature gauges shall be of bimetallic type rotatable at all angles. Dial size shall be 125 mm. The temperature gauges shall be provided with thermo well of 316SS construction with flanged connection and fabricated from drilled bar stock.

vii) All field instruments shall be weatherproof to IP 65 as a minimum.

viii) The electronic transmitters shall be certified flame proof

- IEE xia/ib ISA 7.3 Quality Standard for Instrument Air
- ISA S 7.4 Air Pressure for Pneumatic Controllers, Transmitters and Pneumatic Systems
- ISA RP7.7 Recommended Practice for Producing Quality Instrument Air
- ISA RP 7.1 Pneumatic Control Circuit Pressure Test

PRESSURE GAUGE (PSI)

CASE	STAINLESS STEEL /ALUMINIUM
DIAL SIZE	6"
TUBE	STEEL
CONNECTION	SS, 1/2" NPT MALE @ BOTTOM
BLOW OUT DISC	ELASTOMER
SENSING ELEMENT	SS 1.4571 OR 1.4404 /SS 316-BOURDON TUBE
POTNTER	ALUMINIUM, MICROMETER
ACCURACY	CLASS 1.6 , +/- 2 %
DIAL	ALUMINIUM ALLOY, RUBBER ZERO STOP
LIQUID FILLING	OIL FILLED WEATHER PROFF, GLYCERINE

TEMPERATURE GAUGE

- ANSI MC 96.1 Temperature Measurements Thermocouples
- ASME PTC 19.3 Thermo well Design
- BS 1041 Code for Temperature Measurement
- BS 2765 Dimensions of Temperature Detecting Elements and Corresponding Pockets
- BS 4937 Thermocouple Reference Tables
- BS 5235 Dial Type Expansion Thermometers
- EN 60751 Industrial Platinum Resistance Thermometer Sensors
- IEC 60751 Industrial Platinum Resistance Thermometer Elements
- ICE 60584-1 , BS 4937 International Thermocouple Reference Tables
- ICE 60584-2 , Thermocouple -Tolerances
- ICE 60584-3 , Thermocouple -Extension and Compensating Cables
- ISO 2310 Temperature Measurement Systems

Bimetallic Type and be of "any angle" type with a view to rotate the gauge to facilitate viewing the desired angle. Weather Proof, 6" Dial Size, shall be constructed SS 316

BUTTWELDED NECK FLANGE, ANSI 300#, 150# With Gaskets , Stud Bolts & Nuts , (2PCS PER SET)

MATERIAL:
BONNET STUD

ASTM A 105/A350 LF 1
A193-B7

ACWNET STUD NUT

A194-2H

FORGED STEEL FITTINGS (Tee, Elbow, ...), 2 Inch And Greater

MATERIAL;	A 105/A 350 LF2 OR ASTM A 182 F 316L
PRESSURE RATE.	As Per Tender
MANUFACTURING STANDARD	ASME B16.11, ANSI B 16.9
THREAD	NPT
WELDED END	STEEL BUTT WELDING

FORGED STEEL FITTINGS (Tee, Elbow, ...), < 2 Inch

MATERIAL;	A 105/A 350 LF2 OR ASTM A 182 F 316L
PRESSURE RATE.	As Per Tender
MANUFACTURING STANDARD	ASME B16.11, ANSI B 16.9
THREAD	NPT
WELDED END	STEEL BUTT WELDING

LINE PIPES

ELECTRIC RESISTANT WELDING (ERW) STEEL LINE PIPES CONFORMING TO FOLLOWING API GRADES FOR GAS TRANSMISSION. PIPES SHALL BE FURNISHED WITH PLAIN ENDS BEVELLED TO AN ANGLE OF 30', + 5', -0' WITH A ROOT FACE OF 1/16" + 1/32" AND SHALL BE SUPPLIED WITH BEVEL PROTECTORS. THE PIPE SHALL BE GIVEN INTERNAL AND **EXTERNAL STANDARD MILLS COATING** APPLIED TO THE FULL LENGTH TO PREVENT AGAINST RUSTING WHILE IN TRANSIT. TRACEABILITY REPORT FOR MECHANICAL , CHEMICAL, PROPERTIES AND NDT RESULTS SHALL BE ESTABLISHED AND SENT ALONG WITH MANUFACTURED PIPES. THE SPECIFICATIONS, SIZE AND QUANTITY OF PIPES TO BE SUPPLIED ARE AS FOLLOWS :-

MATERIAL

CARBON STEEL

RANDOM LENGTH

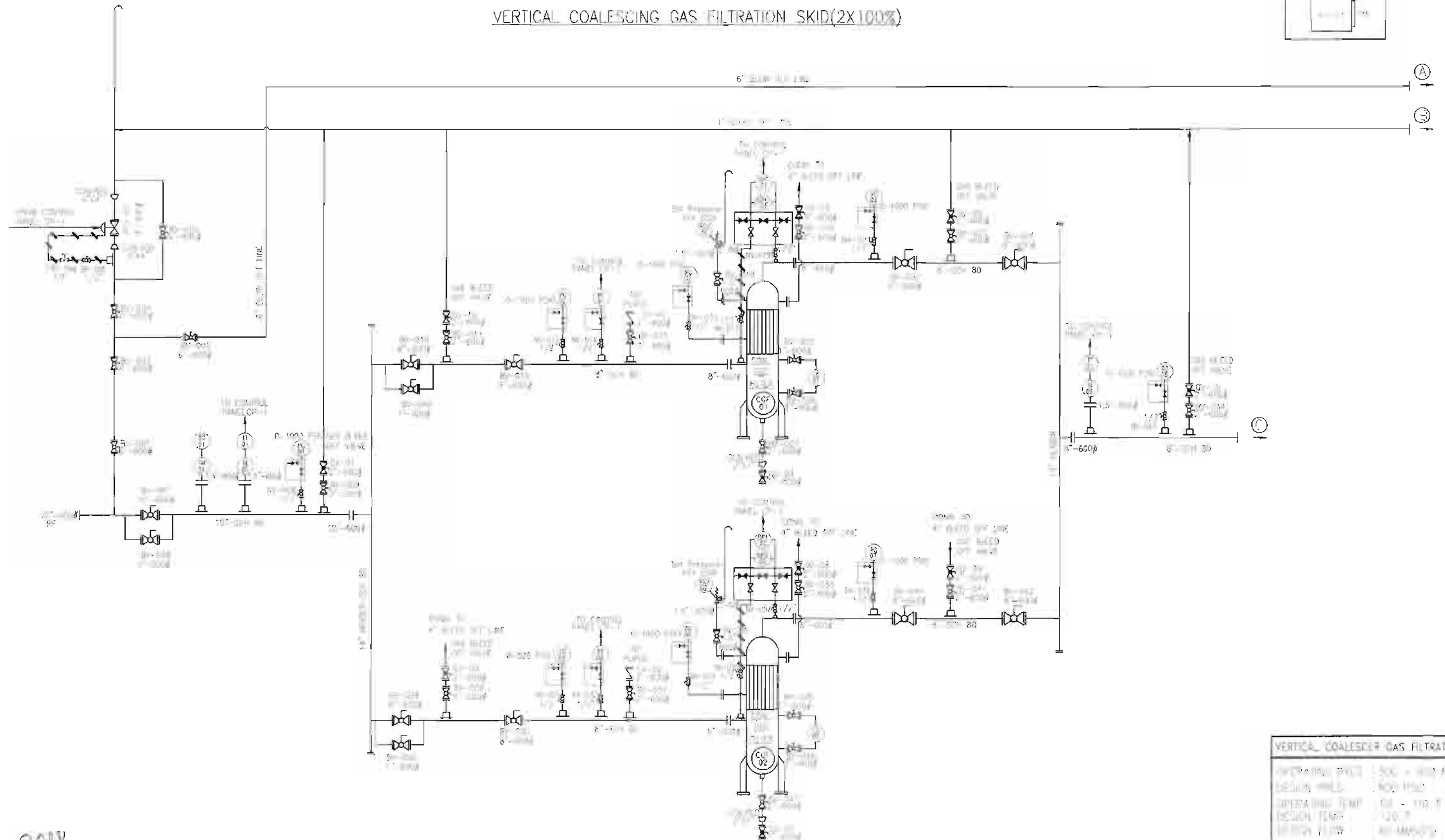
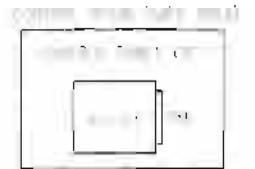
25 FT TO 40 FT

CHEMICAL REQUIREMENTS, PERCENTAGE OF WEIGHT

Carbon (max)	Manganese (max)	Phosphorus (max)	Sulphur (max)
0.28	1.20	0.030	0.030

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VERTICAL COALESCING GAS FILTRATION SKID(2X100%)



VERTICAL COALESCING GAS FILTRATION SKID	
OPERATING PRESSURE	1500 - 1600 PSIG
DESIGN PRESSURE	1600 PSIG
OPERATING TEMP	60 - 110 F
DESIGN TEMP	120 F
DESIGN FLOW	40 MMSCFD
NOMINAL FLOW	300 MMSCFD
FLUID MEDIA	Hydrocarbon Gas

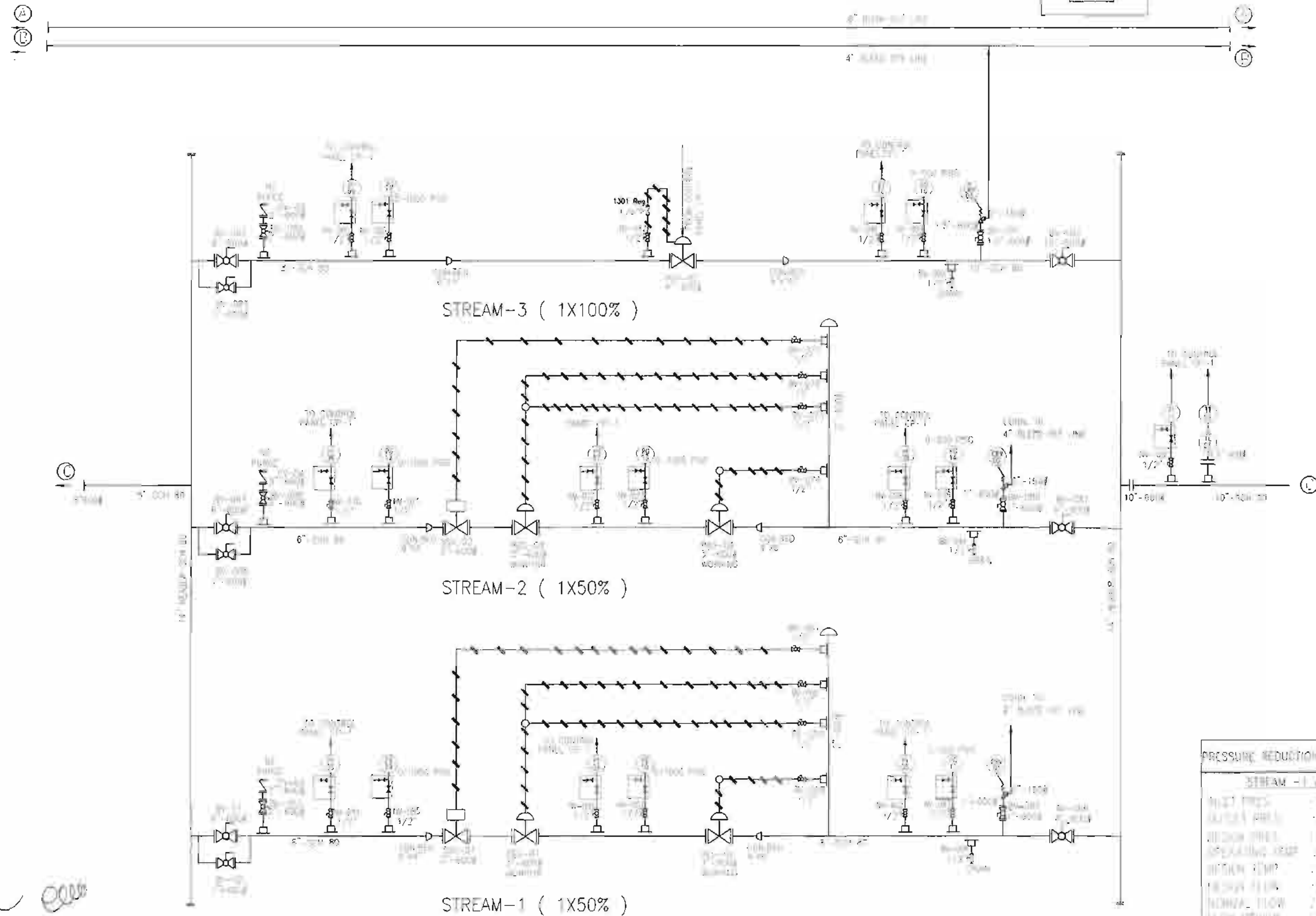
REV	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
0	19-JAN-18	ISSUED FOR PROPOSAL	W	VMS	

DATE: 19-JAN-18	BY: W	CHECKED: VMS	APPROVED: [Signature]
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CUSTOMER: [Redacted]		
PROJECT	GAS DISTRIBUTION AND METERING SYSTEM FOR BELLIN POWER STATION	
DWG.TITLE	PIPING AND INSTRUMENTATION DIAGRAM	
DWG.NO	DWG-001	
SCALE	NTS	REV
PAGE.NO	1 / 3	0

PRESSURE REDUCTION SKID



PRESSURE REDUCTION SKID - 2 X 50%		PRESSURE REDUCTION SKID - 1X100%	
STREAM -1 & STREAM -2		STREAM -3	
INLET PRESS	300 - 400 PSIG	INLET PRESS	300 - 400 PSIG
OUTLET PRESS	300 - 400 PSIG	OUTLET PRESS	300 - 400 PSIG
DESIGN PRESS	1000 PSIG	DESIGN PRESS	1000 PSIG
OPERATING TEMP	100 - 150 F	OPERATING TEMP	100 - 150 F
DESIGN TEMP	150 F	DESIGN TEMP	150 F
MAXIMUM FLOW	250 MMSCFD	MAXIMUM FLOW	250 MMSCFD
NORMAL FLOW	250 MMSCFD	NORMAL FLOW	250 MMSCFD
FLOW METER	Flow Meters	FLOW METER	Flow Meters

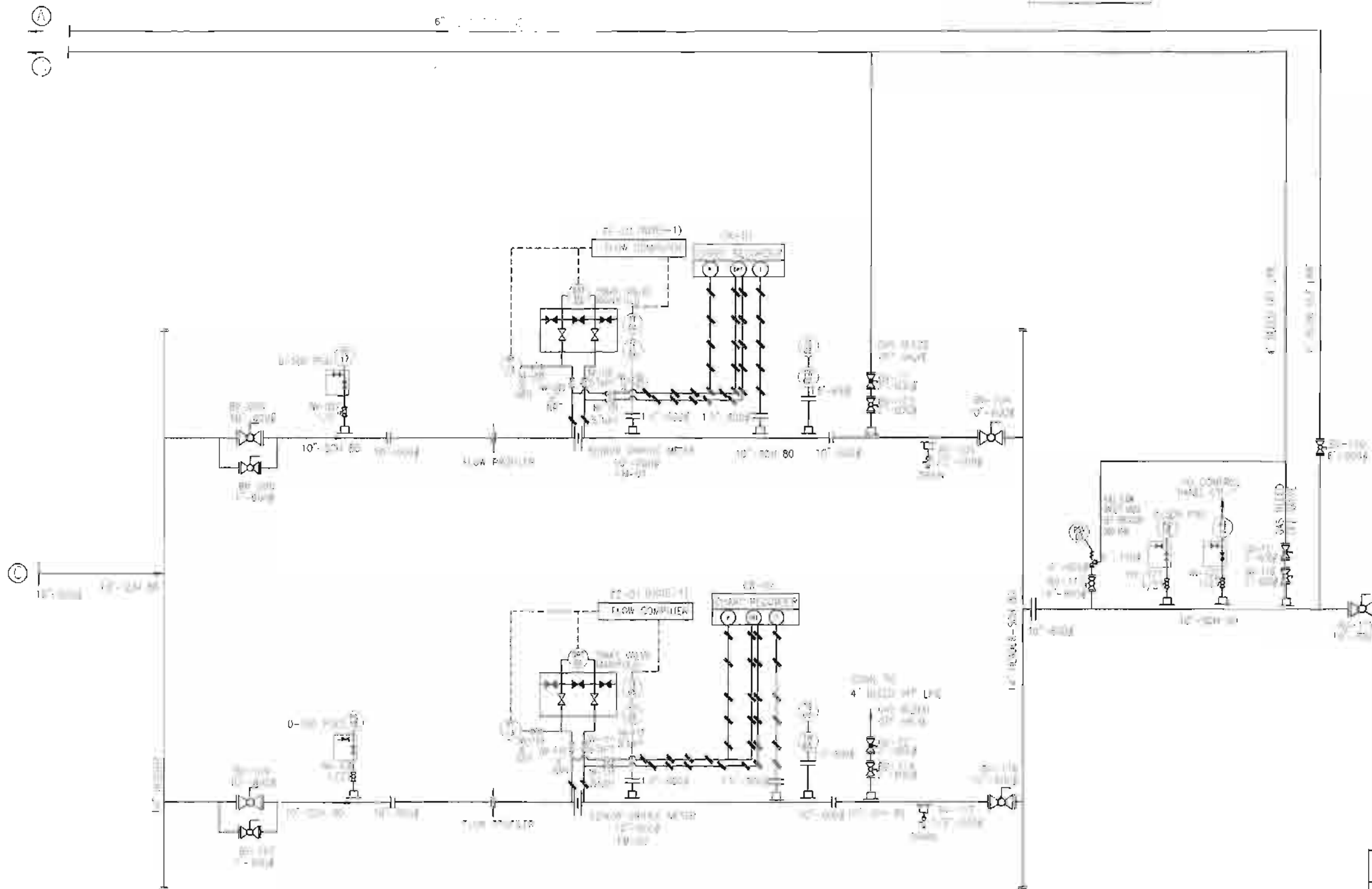
0	18-JAN-18	ISSUED FOR PROPOSAL	JV	VMS	
REV	DATE	DESC	PREP	CHK	APP

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CUSTOMER		
PROJECT GAS DISTRIBUTION AND METERING SYSTEM FOR BILLIN POWER STATION		
DWG.TITLE PIPING AND INSTRUMENTATION DIAGRAM		
DWG.NO	DWG-001	
SCALE	NTS	REV
PAGE.NO	2	3
		0

METERING SKID - (2 X 100%)



METERING SKID - 1 X 100%

DESIGN PRICED	: RED PING
DESIGN PRICED	: RED PING
DESIGN PRICED	: RED PING
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CUSTOMER

PROJECT GAS DISTRIBUTION AND METERING SYSTEM FOR BELLIN POWER STATION

DWG.TITLE PIPING AND INSTRUMENTATION DIAGRAM

DWG.NO DWG-001

SCALE NTS
PAGE.NO 3 / 3
REV 0

REV	DATE	DESC	PREP	CHK	APP
0	16-JAN-18	ISSUED FOR PROPOSAL	JV	VMS	

Annex 5
Payments and Tariffs

5.1 Electric energy production

From the Commercial Operation Date to the expiration or termination of the term of this Agreement, the guaranteed electric energy delivered to EPGE System and "take or pay " shall be apply the Figure as mentioned below

Table 5.1 Guaranteed Electrical Energy for project Term

Year	Net Guarantee Output	Available Hour	Delivered to Grid (MWh)	Guaranteed amount for February to June (MWh)	Guaranteed amount for July to January (MWh)
1	145.49	7,008	1,019,594	497,576	522,018
2	145.49	7,008	1,019,594	497,576	522,018
3	145.49	7,008	1,019,594	497,576	522,018
4	145.49	7,008	1,019,594	497,576	522,018
5	145.49	7,008	1,019,594	497,576	522,018

Dry season means, for any given calendar year, a period of up to five (5) consecutive months, determined by EPGE and notified the Company in writing by no later than 15 January of each calendar year as being "dry season" for that calendar year for the purpose of this agreement, provided that no such notice is given in any calendar year, the "dry season" for that calendar year will be the period from 1st February to 30th June (both date inclusive) in that calendar year.

Wet season means all times during any calendar year other than dry season.

The Guarantee amount for dry season and wet season shall be considered on pro-rata basis for partial months and days in a year, based on the number of operational days of each year over the total number of days in the relevant season.

5.2 Guaranteed Electric Energy Production for Dry and Wet Season

EPGE divided the year as dry season and wet season, and the Company shall produce, on behalf of EPGE, the energy guarantee amount described in Table 5.1. The Guaranteed Electric Energy shall be specified as "Guaranteed Electrical Energy for Project Term" for each period. Take or pay amount shall be considered for dry season and wet season separately.

5.3 Energy Settlement and Guaranteed Off-Take Energy Settlement

From the Commercial Operation Date to the expiration or termination of the term of this Agreement, the Company shall charge EPGE and EPGE shall pay the Company energy rental payments as follows:

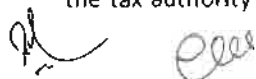
Monthly Payment:

$$\text{Energy Settlement} = A * T$$

A = Actual Delivery Electrical Energy to EPGE System (MWh)

T = Tariff (Energy payment) shall be 33.4274 (USD per MWh)

The above tariff is inclusive of 2.5% withholding tax and 5% commercial tax. In the event that withholding tax or commercial tax on energy payment is exempted or changed, tariff shall be adjusted accordingly. If withholding tax is applicable, EPGE shall deduct withholding tax and make payment to the tax authority on behalf of the Company. EPGE shall provide the copy of documentation evidencing that the payment of withholding tax in relation to each energy payment invoice has been made to the tax authority to the Company as soon as practicable. If commercial tax is applicable, the Company shall make payment to



the tax authority and provide the copy of documentation evidencing that the payment of commercial tax in relation to each energy payment invoice has been made to the tax authority to EPGE as soon as practicable.

"take or pay" Settlement:

Provided the Monthly Payment had been fulfilled, at the end of dry season and wet season within 14 days, the Company and EPGE shall hold a meeting to settle the generation and payment in the following methods.

If $A \geq G$, EPGE takes and the Company dispatch electrical energy actually delivery to the system is more than the guaranteed electrical energy amount, there has not any shortfall for both Parties and any other take or pay is not occurred.

If $G - A > 0$, EPGE take and the Company dispatch electrical energy actually delivery to the system is less than guaranteed electrical energy volume, and the payment shall be calculated and paid as follows:

$$\bullet (G - A - D_{\text{Company}}) * T$$

G = guaranteed electrical energy volume (kWh)

D_{Company} = the Company fails to delivery such electrical energy generation to EPGE due to the forced outage of generation equipment that is solely attributable to the Company's default (kWh), which is calculated as: default hours * (Guaranteed Amount for dry or wet season / dry or wet season calendar hour)

A = Actual Delivery Electrical Energy to the System (kWh)

If result of above equation is positive, EPGE shall pay above amount to the Company for the force outage of the Company that is solely attributable to the Company's default (D_{Company}), the Company shall pay the liquidated damages to EPGE as follows:

In dry seasons, the liquidated damages shall be one hundred percent (100%) of the shortfall amount of the energy generation ($100\% \times D_{\text{Company}} \times \text{Tariff}$).

In wet seasons, the liquidated damages shall be Ten percent (10%) of the shortfall amount of the energy generation ($10\% \times D_{\text{Company}} \times \text{Tariff}$).

Annually settlement:

If the Actual Delivery Electrical Energy to EPGE System (MWh) exceeds the Guaranteed Amount for each season specified in table 5.1 above, EPGE shall purchase such exceeding generation unit and the tariff for such excess of Guaranteed Amount with 2.5% withholding tax and 5% commercial tax is 32.4354 (USD per MWh)



Annex 6
Scope of Services


The Company shall, by itself and/or through a qualified contractor, provide the following services (collectively, the "Scope of Services"):

- (a) construction, installation, commissioning of the Gas Engines;
- (b) operation and maintenance of the Gas Engines;
- (c) construction, installation, commissioning of the required gas supply infrastructure for the Gas Engines;
- (d) carry out the civil engineering works, and to design and construct the foundation and Control Room to install and run the Gas Engines;
- (e) carrying out all the matters relating to acquisition of lubricant/battery/ water supply for cooling system/minor repairs/major repairs, maintenance and cleaning with effect from the Commercial Operation Date;
- (f) administration of the Company Personnel according to applicable labour laws;
- (g) subject to Annex 2 and Annex 4, the Company Personnel under the control of the Company shall, run the Gas Engines and generate the guaranteed electric power supply twenty-four (24) hours continuously in accordance with the Dispatch Procedures in Annex 3; and
- (h) synchronizing the Gas Engines to provide for Parallel Base load Operation simultaneously to generate power through the Company Personnel.



Annex 7
Company's Designated Bank Account



Bank Name : AYA Bank , Yangon (26) (Ayeyarwady Bank Limited)
Bank address : No.416, Maha Bandoia Garden St., Middle Block, Kyauktada Township, Yangon Region, Myanmar
Account Name : POWERGEN KYAUKSE COMPANY LIMITED (FCA)
Account Number : 008-010-303-0025363
Swift Code : AYABMMMYXXX

 Account Name : POWERGEN KYAUKSE COMPANY LIMITED (MMK)
Account Number : 008-011-301-0036139



Annex 8
Guaranteed Technical Parameters for Power Plant

S.No.	Description	Bidder's Scope
1	Installed Capacity MW - (No. of Unit x MW/ Unit)	147.768 MW (8 units x 18.471 MW/Unit)
2	Guarantee Generating Output MW - (No. of Unit x MW/ Unit) at site Condition	145.490 MW (8 Units x 18.18625 MW/Unit)
3	Generator Output Voltage (V)	11 kV
4	Net Efficiency (%) (Plant overall)	50% Load 41.34% based on HHV
		100% Load 41.34% based on HHV
	Net Guarantee Heat Rate (Btu/kWh) (Plant overall) (at any site condition based on Higher Heating value)	50% Load 8,253.80 Btu/kWh
		100% Load 8,253.80 Btu/kWh
	Fuel cost (US cents/kWh) = Net Guarantee Heat Rate (Btu/kWh) * gas price (USD/MMBtu) /10,000	50% Load 8.03 US cents/kWh
	Fuel cost (US cents/kWh) = Net Guarantee Heat Rate (Btu/kWh) * gas price (USD/MMBtu) /10,000	100% Load 8.03 US cents/kWh
	Fuel Consumption based on High Heating Value	50% Load 14.3 MMCFD
		100% Load 28.5 MMCFD
	kWh/mmBtu @ High Heating Value (Plant overall) at any site condition	50% Load 121.2 kWh/mmBtu
		100% Load 121.2 kWh/mmBtu
5	Number of Total Running Unit	8
6	Number of Reserved Unit/Machine Model	0
7	Maker & Country of origin	W18V50SG engines manufactured by Wärtsilä Finland Oy in factory located in Trieste, Italy, European Union
8	Land requirement for power plant and new switchbay	24,000 m ²
9	Site Layout Plan	Please refer the attached General Layout F0419T-Z-01
10	Construction Period (After issuing the Letter of Acceptance)	286 days after LOA
11	COD (After issuing the Letter of Acceptance)	286 days after LOA
12	Proposal for required new switchbay and transmission line facility	Please refer the attached Single Line Diagram F0419T-D01-01
13	Proposal for required new gas supply infrastructure	Please refer the attached Gas Supply Infrastructure Drawings and Map
14	Required gas pressure of power plant	Minimum 12.5 bar gas regulating unit inlet

S.No.	Description	Bidder's Scope
15	Transformer Voltage ratio, Capacity, Vector group, Maker and country of origin (for low voltage side)	2 × [70MVA, 145±2X2.5%/11Kv,Ynd11] 1 × [50MVA, 45±2X2.5%/11kV Ynd11] Please see attached information sheet for Maker and Country of Origin.
16	Transformer Voltage ratio, Capacity, Vector group, Maker and country of origin (for high voltage side)	2 × [70MVA, 145±2X2.5%/11Kv,Ynd11] 1 × [50MVA, 145±2X2.5%/11kV, Ynd11] Please see attached information sheet for Maker and Country of Origin.
17	Maker and country of origin for switchgear (for low voltage side)	Please see attached information sheet for Maker and Country of Origin.
18	Maker and country of origin for switchgear (for high voltage side)	Please see attached information sheet for Maker and Country of Origin.
19	Island mode	The Power Plant is capable of operating as an Inland mode.

Gas price shall be assumed as 9.7346 (USD/MMBtu) to calculate the fuel cost (USD/kWh).

The above data shall be based on the following conditions:

1. EPGE SYSTEM VOLTAGE 132kV ±10 %.
2. POWER FACTOR 0.8 (LAGGING) UP TO (0.9 LEADING)
3. FREQUENCY 50 HZ
4. FREQUENCY VARIATION SETTING

(51.5 - 52 Hz, 15 minutes) (51-51.5 Hz, 90 minutes)

(48.5 - 51 Hz, continuous)

(47.5 - 48.5 Hz, 25 minutes)

(47 - 47.5 Hz, 30 minutes)




1. General

The Company shall plan, design, construct and operate the Facility and design and construct the New Transmission Facilities and generally comply with the standards and guidelines of the Agreement and those listed below. This includes obtaining and maintaining all necessary permits and licences for the construction and operation of the Facility and the construction of the New Transmission Facilities.

- (i) Applicable national Myanmar environmental, social and labour laws
- (ii) IFC Performance Standards
- (iii) World Bank Group EHS General Guide lines
- (iv) World Bank Group EHS Guidelines for Thermal Power Plants
- (v) World Bank Group EHS Guidelines for Electric Power and Transmission Distribution
- (vi) IFC Stakeholder Engagement Handbook and other relevant Good Practice Notes
- (vii) IFC Handbook for Preparing a Resettlement Action Plan (if applicable)

The Myanmar Environmental Conservation Law (2012) has been enacted to implement the National Environmental Policy. This law includes principles and guidelines for sustainable development, conservation of clean environment, and preservation of natural and cultural heritage. Under this law regulations and standards will be issued from time to time which the Company will comply with. References to "WBG" in this Schedule are to the "World Bank Group".

2. Environmental Impact Assessment and Related Laws

The Company shall prepare an Environmental Impact Assessment (EIA) for the project in accordance with the requirements and regulations of the Ministry of Environmental Conservation and Forestry (MOECF). The Company shall prepare an Environmental and Social Impact Assessment (ESIA) in accordance with IFC Performance Standards relating to the adequate identification and assessment of project risks and impacts. To the extent practicable, the EIA will be equivalent to the ESIA, with only a single assessment prepared to avoid confusion. If separate assessments are prepared, the Company shall exercise best efforts to minimize inconsistencies between the two documents. The EIA, ESIA and related management plans shall be prepared by Company personnel or external experts with knowledge of IFC Performance Standards 1-8. The Company shall also comply with all relevant environmental protection laws, including but not limited to:

- The Forest Law (1992) The Forest Rules (1995)
- The Protection of Wild Life, Wild Plants and Conservation of Natural Areas Law (1994) Wild Life Protection rules (2002)
- The Protection of Wildlife and Conservation of Natural Areas Law - SLORC Law No. 6/94
- The Forest Department Notification No. 583/94



- Environmental Conservation Law (2012) Environmental Conservation Rules (2014)
- National Environmental Policy (1994)
- The Conservation of Water Resources and Rivers Law (2006) Myanmar Agenda 21

3. Standards and Guidelines

The project will comply with all relevant national, WBG and IFC guidelines and standards, with the main applicable WBG guidelines summarized below.

3.1. Air Emissions Guidelines

The Company shall ensure that the project complies with the combustion emission limits set out in the WBG EHS Guidelines for Thermal Power Plants.

3.2. Ambient Air Quality Guidelines

In the absence of national legislated ambient air quality standards in Myanmar, the Company shall demonstrate, through air dispersion modeling, plant compliance with the World Health Organization (WHO) Ambient Air Quality Guidelines as specified in WBG EHS General Guidelines.

3.3. Noise Levels Guidelines

Working environments (worker exposure): The Facility shall be designed to achieve the noise limits for working environments set out in the WBG EHS General Guidelines.

Location / Activity	Equivalent Level LA _{eq} 8 hours
1. Heavy industry (no demand for oral communication)	85 dB(A)
2. Open offices, control rooms, service counters or similar	45 – 50 dB(A)

Source: Table 2.3.1, WBG EHS General

Guidelines: No employees should be exposed to a noise level greater than the guideline limits detailed above without hearing protection. Noise levels shall be measured according to appropriate International Electrotechnical Commission (IEC) standards.

Ambient conditions (beyond the facility boundary): The Company shall also comply with the background noise level guidelines indicated in the WBG EHS General Guidelines, as set out below.

Receptor	One Hour L _{avg} (dBA)	
	Daytime (07:00 – 22:00)	Night time (22:00 – 07:00)
1. Residential, institutional, educational	55	45

Handwritten signatures and initials:

2. Industrial, commercial	70	70
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Source: Table 1.7.1, WBG EHS General Guidelines.

The WBG EHS General Guidelines require that noise impacts should not exceed the levels presented in Table 1.7.1, or result in a maximum increase in background levels of 3 dB at the nearest receptor location off-site. Measurements are to be taken at noise receptors located outside the site. The actual permissible noise pressure levels will be confirmed in the EIA/ESIA.

3.4. Effluent Guidelines

The Company shall ensure that applicable environmental regulations, standards and guidelines for waste water discharge and re-use are complied with as well as national and international standards for water quality and effluent management. The table below lists the effluent discharge guideline limits applicable to the Facility as per the WBG EHS Guidelines for Thermal Power Plants. These standards apply to the discharge of effluent at the end of the outlet prior to release into the receiving waters.

Parameter	Maximum Concentration mg/L, except pH and temperature
1. pH	6 – 9
2. TSS	50
3. Oil and grease	10
4. Total residual chlorine	0.2
5. Chromium – total (Cr)	0.5
6. Copper (Cu)	0.5
7. Iron (Fe)	1.0
8. Zinc (Zn)	1.0
9. Lead (Pb)	0.5
10. Cadmium (Cd)	0.1
11. Mercury (Hg)	0.005
12. Arsenic (As)	0.5

Source: Table 5, WBG EHS Guidelines for Thermal Power Plants; WBG General EHS Guidelines Table 1.3.1 - Indicative Values for Treated Sanitary Sewage Discharges.

Temperature increase by thermal discharge from cooling system Site specific requirement to be established by the Environmental Assessment (EA). Elevated temperature areas due to discharge of once-through cooling water (e.g., 1 Celsius above, 2 Celsius above, 3 Celsius above ambient water temperature) should be minimised by adjusting

PL

0022

intake and outfall design through the project specific EA depending on the sensitive aquatic ecosystem around the discharge point.

4. Labour Requirements

The Company shall ensure that all relevant Myanmar labour laws are complied with, including:

- Employment Restriction Act (1959)
- Employment Statistics Act (1948) Factories Act (1951)
- Labour Organization Law (2011)
- Leave and Holidays Act (1951)
- Payment of Wages Act (1936) Workmen's Compensation Act (1923) Minimum Wage Law (2013)
- Settlement of Labour Dispute Law (2012) Social Security Law (2012)
- Employment and Skill Development Law (2013)

Myanmar has been a member of the International Labour Organization (ILO) since 1948, therefore, the Company shall comply with the following ILO conventions:

- C029 - Forced Labour Convention, 1930 (No. 29) - 04 Mar 1955 C087 - Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87) - 04 Mar 1955
- C001 - Hours of Work (Industry) Convention, 1919 (No. 1) - 14 Jul 1921
- C002 - Unemployment Convention, 1919 (No. 2) - 14 Jul 1921
- C006 - Night Work of Young Persons (Industry) Convention, 1919 (No. 6) - 14 Jul 1921
- C011 - Right of Association (Agriculture) Convention, 1921 (No. 11) - 11 May 1923
- C014 - Weekly Rest (Industry) Convention, 1921 (No. 14) - 11 May 1923
- C015 - Minimum Age (Trimmers and Stokers) Convention, 1921 (No. 15) - 20 Nov 1922
- C016 - Medical Examination of Young Persons (Sea) Convention, 1921 (No. 16) - 20 Nov 1922
- C017 - Workmen's Compensation (Accidents) Convention, 1925 (No. 17) - 16 Feb 1956
- C018 - Workmen's Compensation (Occupational Diseases) Convention, 1925 (No. 18) - 30 Sep 1927
- C019 - Equality of Treatment (Accident Compensation) Convention, 1925 (No. 19) - 30 Sep 1927
- C021 - Inspection of Emigrants Convention, 1926 (No. 21) - 14 Jan 1928
- C026 - Minimum Wage-Fixing Machinery Convention, 1928 (No. 26) - 21 May 1954
- C027 - Marking of Weight (Packages Transported by Vessels) Convention, 1929 (No. 27) - 07 Sep 1931
- C042 - Workmen's Compensation (Occupational Diseases) Convention (Revised), 1934 (No. 42) - 17 May 1957
- C052 - Holidays with Pay Convention, 1936 (No. 52) - 21 May 1954



- C063 - Convention concerning Statistics of Wages and Hours of Work, 1938 (No. 63)

Excluding Parts III and IV -24 Nov 1961, The Company shall also comply with the provisions of IFC

Performance Standard 2 Labor and Working Conditions, which includes provisions relating to general working conditions, workers organisations, non-discrimination and equal opportunity, retrenchment, the provision of a grievance mechanism, and the prohibition of child labor and forced labor.

5. Other Applicable Laws and Guidelines

The Company is responsible for ensuring that other national laws that may be applicable to the

Facility are adhered to:

- Land Acquisition Act (1894)
- The Farmland Act (2012)
- Towns Act (1907) (as amended) Village Act (1908) (as amended)
- Protection of the Right of Cultivation Act (1963) Tenancy Law (1963) and Tenancy (Amendment) Law (1965)

If land acquisition and/or resettlement is required, the Company shall adhere to the provisions of IFC.

Performance Standard 5 Land Acquisition and Involuntary Resettlement.

6. Permits

The Company is responsible for obtaining and maintaining all the necessary permits and licenses for the construction, operation and decommissioning of the Facility. The Company is responsible for identifying, obtaining and maintaining all necessary Permits and Licenses to construct and operate the Facility. MEPE shall give reasonable assistance to the Company in obtaining such permissions and clearances from the relevant authorities.

7. Environmental and Social Management System

The Company shall prepare an Environmental and Social Management System (ESMS) for the project in accordance with the IFC Performance Standards.



Annex 10
Invoice format

Company Name :
Address :
Phone No :

PROFORMA INVOICE

Attn : Managing Director
Copy to: General Manager (Finance department),
Chief Engineer (Thermal power department)
Electric Power Generation Enterprise
Ministry of Electricity and Energy
No.27 Naypyitaw.
Republic of the union of Myanmar

Invoice Number :
Invoice Date :
Due Date :
Contract :

No.	Description	Total
-----	-------------	-------

The xxx MW Power Plant in xxx , Republic of Union of Myanmar.

Power Electricity Production of xxx 20xx:

- | | | |
|---|-----------------|-----------|
| 1. Actual | : xxx MWh | MMK xxx |
| Tariff | : xxx USD / MWh | |
| (Including Commercial Tax 5% and Withholdings Tax 2.5%) | | |
| (Exchange rate : 1 USD = xxx Myanmar Kyats (MMK)) | | |
| 2. Less 2.5 % Withholdings Tax | | MMK (xxx) |
| 3. Amount Now Due | | MMK xxx |

PAYMENT TERMS

1. Payment shall be made based on the above currency MMK

2. Payment shall be made in the full amount

3. The above payment can be made by transfer cheque

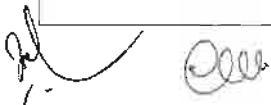
4. TRANSFER shall be made to:

Account Number :
Account Name :
Swift Code : (if applicable)

5. Bank Detail

Bank Name :

Seal & Signature of
Authorized Persons



Active Energy Record Table of

() MW Gas-Fired Electricity Generating Plant of (Company Name) in region

For the month of (xxx , 20xx)

Name of Feeder
Master (Main) Energy Meter
Meter
EPGE's No. (xxxxxxx)

(Back up) Slave Energy

EPGE's No. (xxxxxxx)

xxxxxx

Manufacturer's Sr: No

xxxxxxx

Manufacturer's Sr: No

xxxxxx

Date	Time	(Main) Masete Energy Meter (MWh)				(Back up) Slave Energy Meter (MWh)			
		Active Energy Sent Out		Active Energy Feceived of		Active Energy Sent Out		Active Energy Feceived of	
		From Generating Plant	Energy	From Generating Plant	Meter	From Generating Plant	Energy	From Generating Plant	Meter
		Meter Reading	Sent Out	Meter Reading	Received	Meter Reading	Sent Out	Meter Reading	Received

Representative of
(Company Name)

Representative of

Power System Department, MOEE

Representative of

Thermal Power Department, MOEE

Representative of

Mandalay Electricity Supply Corporation, MOEE

Signature
Name
Designation
Department

Gas Consumption Record Table of

() MW Gas-Fired Electricity Generating Plant of (Company Name) in region

For the month of (xxx , 20xx)

Date	Time	Main Meter (MMCF)		Back Up Meter (MMCF)		Main Meter (MMCF)		Back Up Meter (MMCF)	
		Meter Reading	Consumption	Meter Reading	Consumption	Meter Reading	Consumption	Meter Reading	Consumption

Representative of
(Company Name)

Representative of
Electric Power Generation Enterprise , MOEE

Representative of
Myanma Oil and Gas Enterprise, MOEE

Signature -----
Name -----
Designation -----
Department -----





မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်သို့

(က) ရင်းနှီးမြှုပ်နှံသူ၏ အဆိုပြုချက် - ပုံစံ (၂)

အဆိုပြုချက်



သို့

ဥက္ကဋ္ဌ

မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်

စာအမှတ် | PGK/KS-135/MIC- /2018

ရက်စွဲ | ၂၀၁၈ ခုနှစ်၊ ဩဂုတ် လ ရက်

ကျွန်တော်/ကျွန်မသည် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုဥပဒေပုဒ်မ ၃၆ နှင့်အညီ ပြည်ထောင်စုသမ္မတ မြန်မာနိုင်ငံတော်အတွင်း ရင်းနှီးမြှုပ်နှံမှုပြုလုပ်လိုပါသဖြင့် ခွင့်ပြုပါရန် အောက်ပါအချက်အလက်များ ကိုဖော်ပြ၍ လျှောက်ထားအပ်ပါသည်-

၁။ ရင်းနှီးမြှုပ်နှံသူ၏ -

(က) အမည် ဦးမောင်ကျေး

(ခ) အဖအမည် ဦးခင်ငါး (ခ) ဦးခင်ရန်

(ဂ) နိုင်ငံသားစိစစ်ရေးကတ်အမှတ်/ ၁၂/လသန(နိုင်)၀၁၈၁၇၄

နိုင်ငံကူးလက်မှတ်အမှတ်

(ဃ) နိုင်ငံသား မြန်မာနိုင်ငံသား

(င) နေရပ်လိပ်စာ

(၁) ပြည်တွင်း အမှတ်(စီ-၄)၊ မွန်မြတ်မေတ္တာလုံးခြင်းအိမ်ယာ၊ ပင်ရွှေညောင်လမ်း၊ တာမွေမြို့နယ်၊ ရန်ကုန်မြို့။

(၂) ပြည်ပ

(စ) တယ်လီဖုန်း /ဖက်စ် ၀၁-၈၆၁၀၆၅၄၊ ၀၁-၈၆၁၀၆၅၆ / ဖက်စ်၀၁-၂၉၅၀၆၇

(ဆ) အီးမေးလ်လိပ်စာ maungkyay@national-infra.com

(ဇ) ပင်မကုမ္ပဏီအမည် နေရှင်နယ်အင်ဖရာစထရက်ချာ ဟိုးလ်ဒင်း(စ်) ကုမ္ပဏီလီမိတက် (NIHC)

(ဈ) ပင်မကုမ္ပဏီတည်ရှိရာလိပ်စာ အမှတ်(၃၆)၊ သိမ်ဖြူလမ်း၊ ပုဇွန်တောင်မြို့နယ်၊ ရန်ကုန်မြို့။

(ည) လုပ်ငန်းအမျိုးအစား (၁၄၅.၄၉)မဂ္ဂါဝပ်လျှပ်စစ်ဓါတ်အားပေးစက်ရုံတည်ဆောက်/လည်ပတ်ပြုပြင်ထိန်းသိမ်းခြင်းလုပ်ငန်း

၂။ ဖက်စပ်ပြုလုပ်၍ ရင်းနှီးမြှုပ်နှံလိုပါကရင်းနှီးမြှုပ်နှံသူနှင့် ဖက်စပ်ပြုလုပ်မည့် သူများ၏ -

- (က) အမည် မြန်မာတကုဝေဒနှင့်စက်ပစ္စည်းကုမ္ပဏီလီမိတက် (MCM)
SEPCOIII Electric Power Construction Co.,Ltd (SEPCOIII)
- (ခ) အဖအမည်
- (ဂ) နိုင်ငံသားစိစစ်ရေးကတ်အမှတ်/ MCM ကုမ္ပဏီမှတ်ပုံတင်အမှတ် - ၆၆၈/၂၀၀၁-၂၀၀၂
SEPCOIII Company Registration No - 913702121654224203
နိုင်ငံကူးလက်မှတ်အမှတ်
- (ဃ) နိုင်ငံသား: MCM (မြန်မာ), SEPCOIII (တရုတ်)
- (င) နေရပ်လိပ်စာ
- (၁) ပြည်တွင်း: MCM - အမှတ် - ၁၁၂၀-၁၁၂၁၊ သုမင်္ဂလာလမ်း၊ ၁၆/၄ ရပ်ကွက်၊ သင်္ကန်းကျွန်းမြို့နယ်၊
ရန်ကုန်။
- (၂) ပြည်ပ No-882-1, Tong'an Road, Laoshan District, Qingdao, China.
- (စ) ပင်မကုမ္ပဏီအမည်
- (ဆ) ပင်မကုမ္ပဏီတည်ရှိရာလိပ်စာ
- မှတ်ချက်။ အထက်အပိုဒ် ၁၊ ၂ တို့နှင့် စပ်လျဉ်း၍ အောက်ပါအချက်များကို ပူးတွဲ
တင်ပြရန်-
- (၁) ကုမ္ပဏီမှတ်ပုံတင်အထောက်အထားများ (မိတ္တူ)
- (၂) နိုင်ငံသားစိစစ်ရေးကတ်အမှတ် (မိတ္တူ) နှင့် နိုင်ငံကူးလက်မှတ်
(မိတ္တူ)
- (၃) အဆိုပြုလုပ်ငန်းတွင် ပါဝင်လိုသူများ၏ လုပ်ငန်းပိုင်းနှင့် ငွေရေး
ကြေးရေး ဆိုင်ရာအထောက်အထားများ

၃။ ရင်းနှီးမြှုပ်နှံသူကိုယ်တိုင် လျှောက်ထားခြင်းမဟုတ်ပါကလျှောက်ထားသူ၏ -

- (က) အမည်
- (ခ) ဆက်သွယ်ရမည့်ပုဂ္ဂိုလ်အမည်
- (လျှောက်ထားသူသည် စီးပွားရေးအဖွဲ့အစည်းဖြစ်ပါက)
မှတ်ချက်။ တရားဝင်ကိုယ်စားလှယ်လွှဲစာပူးတွဲတင်ပြရန်
- (ဂ) နိုင်ငံသားစိစစ်ရေးကတ်အမှတ်/နိုင်ငံကူးလက်မှတ်အမှတ်
- (ဃ) နိုင်ငံသား:

(င) မြန်မာနိုင်ငံတွင်နေထိုင်သည့်

နေရပ်လိပ်စာ

(စ) တယ်လီဖုန်း /ဖက်စ်

(ဆ) အီးမေးလ်လိပ်စာ

၄။ ရင်းနှီးမြှုပ်နှံမှုပြုလုပ်လိုသည့် လုပ်ငန်းအမျိုးအစား:

၅။ ဖွဲ့စည်းမည့် စီးပွားရေးအဖွဲ့အစည်းပုံသဏ္ဌာန်

☐ ရာခိုင်နှုန်းပြည့် ☐ ဖက်စပ်ပြုလုပ်ခြင်း (ဖက်စပ်စာချုပ်မှုကြမ်းတင်ပြရန်)

☐ အခြားသဘောတူညီချက်ပုံစံတစ်မျိုးမျိုးဖြင့်ဆောင်ရွက်ခြင်း (စာချုပ်မှုကြမ်းတင်ပြရန်)

၆။ အစုရှယ်ယာရှင်များစာရင်း

စဉ်	အစုရှယ်ယာရှင်အမည်	နိုင်ငံသား	အစုရှယ်ယာပိုင်ဆိုင်မှု %
၁	National Infrastructure Holdings Co.,Ltd	မြန်မာ	၅၄%
၂	Myanmar Chemical and Machinery Co.,Ltd	မြန်မာ	၃၇%
၃	SEPCOIII Electric Power Construction Co.,Ltd	တရုတ်	၉%

၇။ ကုမ္ပဏီဖွဲ့စည်းခြင်းနှင့်သက်ဆိုင်သောအချက်အလက်များ

(က) ခွင့်ပြုမတည်ငွေရင်း: USD - One Million

(ခ) အစုရှယ်ယာအမျိုးအစား: 1 share = USD 1, Shares = 1,000,000

(ဂ) အစုရှယ်ယာဝင်များကထည့်ဝင်မည့် အစုရှယ်ယာပမာဏ

မှတ်ချက်။ သင်းဖွဲ့မှတ်တမ်း/သင်းဖွဲ့စည်းမျဉ်း သို့မဟုတ် ဖွဲ့စည်းပုံအခြေခံစည်းမျဉ်း ပူးတွဲ တင်ပြရန်

၈။ မတည်ငွေရင်းနှင့်သက်ဆိုင်သည့်အချက်အလက်များ -

ကျပ်/US\$(သန်းပေါင်း)

(က) ပြည်တွင်းမှထည့်ဝင်မည့် မတည်ငွေရင်း: Ks - 16,804.86 (13%) / US\$ - 12.00

ပမာဏ/ ရာခိုင်နှုန်း:

(ခ) နိုင်ငံခြားမှ ယူဆောင်လာမည့် မတည်ငွေရင်း: Ks - 112,944 (87%) / US\$ - 80.68

ပမာဏ/ ရာခိုင်နှုန်း:

စုစုပေါင်း:

Ks - 129,749.37 / US\$ - 92.68

(ဂ) အဆိုပြုမတည်ငွေရင်းနှစ်အလိုက်ထည့်ဝင်မည့်အခြေအနေ/ယူဆောင်လာမည့်ကာလ
တစ်နှစ်

(ဃ) ရင်းနှီးမြှုပ်နှံမှုတန်ဖိုး/ပမာဏ

USD 92.68 Million

(င) ရင်းနှီးမြှုပ်နှံမှုပြုလုပ်လိုသည့် သက်တမ်း:

(၅)နှစ်/ပြီးနောက်ဌာနမှသက်တမ်းတိုးရန်ဆန္ဒရှိပါက (သို့)

(စ) ရင်းနှီးမြှုပ်နှံမှုလုပ်ငန်းတည်ဆောက်မှုကာလ

ပြည်နယ်တိုင်းဒေသကြီးရှိ စက်မှု/အထူးစီးပွားရေးစက်မှု
တို့တွင် လျှပ်စစ်လိုအပ်ချက်များ တစ်ဖက်တစ်လမ်းဖြည့်ဆည်း
နိုင်ရေးအတွက် ဆက်လက်ရင်းနှီးမြှုပ်နှံမည့်ကာလ

မှတ်ချက်။ အပိုဒ် ၈(င) နှင့် စပ်လျဉ်း၍ ထူးခြားသည့် အခြေအနေရှိပါက နောက်ဆက်
တွဲဖြင့် ဖော်ပြပါရန်

၉။ နိုင်ငံခြားမှ ယူဆောင်တင်သွင်းလာမည့် မတည်ငွေရင်း၏ အသေးစိတ်စာရင်း -

	နိုင်ငံခြားငွေ (သန်းပေါင်း)	ညီမျှသည့်ခန့်မှန်းငွေကျပ် (သန်းပေါင်း)
(က) နိုင်ငံခြားငွေ		
(အမျိုးအစားနှင့် တန်ဖိုးပမာဏ)		
(ခ) စက်ပစ္စည်းများ၊ စက်ကိရိယာများ	74.94	104,912.34
စသည့်ပစ္စည်းတို့၏ တန်ဖိုးပမာဏ		
(အသေးစိတ်စာရင်းပူးတွဲတင်ပြရန်)		
(ဂ) ကနဦးကုန်ကြမ်းပစ္စည်းများနှင့်		
အခြားအလားတူပစ္စည်းများ၏		
တန်ဖိုးပမာဏ		
(အသေးစိတ်စာရင်းပူးတွဲတင်ပြရန်)		
(ဃ) လိုင်စင်၊ တီထွင်မှုပိုင်ဆိုင်ခွင့်၊		
စက်မှုဒီဇိုင်း၊ ကုန်အမှတ်တံဆိပ်၊		
မူပိုင်ခွင့် စသည့် အသိဉာဏ်		

ဆိုင်ရာပစ္စည်းများကိုတန်ဖိုး		
ဖြတ်နိုင်သောအခွင့်အရေးများ၏		
တန်ဖိုးပမာဏ		
(င) ကျွမ်းကျင်မှုနည်းပညာရပ်များ၏	5,74	8,032.18
တန်ဖိုးပမာဏ		
(စ) အခြား (ဥပမာ-ဆောက်လုပ်ရေး		
လုပ်ငန်းသုံးပစ္စည်းများ)		
		112,944
စုစုပေါင်း		

မှတ်ချက်။ အပိုဒ် ၉ (ဃ) (င) တို့နှင့် စပ်လျဉ်း၍ အသုံးပြုခွင့်အထောက်အထားများ
ပူးတွဲ တင်ပြရန်။

၁၀။ ပြည်တွင်းမှထည့်ဝင်မည့် မတည်ငွေရင်း၏ အသေးစိတ်စာရင်း-

		ကျပ်(သန်းပေါင်း)
(က) ငွေပမာဏ		6,196.99
(ခ) စက်ပစ္စည်းကိရိယာများတန်ဖိုးပမာဏ		
(အသေးစိတ်စာရင်းပူးတွဲတင်ပြရန်)		
(ဂ) မြေ/ အဆောက်အအုံ တန်ဖိုး သို့မဟုတ် ငှားရမ်းခ		
(ဃ) အဆောက်အအုံဆောက်လုပ်မှုကုန်ကျစရိတ်	10,547.87	
(င) ပရိဘောဂနှင့် လုပ်ငန်းသုံးပစ္စည်းများ		
တန်ဖိုးပမာဏ		
(အသေးစိတ်စာရင်းပူးတွဲတင်ပြရန်)		
(စ) ကနဦးကုန်ကြမ်းပစ္စည်းတန်ဖိုးပမာဏ		
(အသေးစိတ်စာရင်းပူးတွဲတင်ပြရန်)		
(ဆ) အခြား	60	
စုစုပေါင်း		16,804.86

၁၁။ ချေးငွေနှင့်သက်ဆိုင်သည့် အချက်အလက်များ -

- ☐ ပြည်တွင်းချေးငွေ ကျပ် အမေရိကန်ဒေါ်လာ
- ☐ ပြည်ပချေးငွေ 63.86 အမေရိကန်ဒေါ်လာ

၁၂။ ဆောင်ရွက်မည့် စီးပွားရေးအဖွဲ့အစည်းနှင့် သက်ဆိုင်သောအချက်အလက်များ -

- (က) ရင်းနှီးမြှုပ်နှံမှုပြုလုပ်မည့်ဒေသ(များ)/တည်နေရာ
..... မန္တလေးတိုင်းဒေသကြီး၊ ကျောက်ဆည်ခရိုင်၊ စဉ့်ကိုင်မြို့နယ်။
- (ခ) မြေ သို့မဟုတ် မြေနှင့်အဆောက်အအုံနေရာအမျိုးအစားနှင့် အကျယ်အဝန်းလိုအပ်ချက်
- (၁) တည်နေရာ..... မန္တလေးတိုင်းဒေသကြီး၊ ကျောက်ဆည်ခရိုင်၊ စဉ့်ကိုင်မြို့နယ်၊ ၂၃၀ကေပေဘဲလင်းဓာတ်အားခွဲရုံပန်းတွင်း
- (၂) မြေ/အဆောက်အအုံအကျယ်အဝန်း၊အရေအတွက် (၁၀.၁၂) ဧက
- (၃) လက်ရှိပိုင်ဆိုင်သူ..... လျှပ်စစ်နှင့် စွမ်းအင်ဝန်ကြီးဌာန
- (ကက) အမည်/ ကုမ္ပဏီအမည်/ဌာန.....
- (ခခ) နိုင်ငံသားစိစစ်ရေးကတ်အမှတ်.....
- (ဂဂ) နေရပ်လိပ်စာ.....
- (၄) မြေအမျိုးအစား.....
- (၅) မြေငှားဂရန် ခွင့်ပြုကာလ
- (၆) ငှားရမ်းမည့်ကာလမှ ထိ ()နှစ်
- (၇) ငှားရမ်းခနှုန်းထား.....
- (ကက) မြေ.....
- (ခခ) အဆောက်အအုံ.....
- (၈) ရပ်ကွက်.....
- (၉) မြို့နယ်
- (၁၀) ပြည်နယ်/တိုင်းဒေသကြီး.....
- (၁၁) ငှားရမ်းမည့်ပုဂ္ဂိုလ်.....
- (ကက) အမည်/ ကုမ္ပဏီအမည်/ဌာန
- (ခခ) အဖအမည်
- (ဂဂ) နိုင်ငံသား
- (ဃဃ) နိုင်ငံကူးလက်မှတ်အမှတ်/
- နိုင်ငံသားစိစစ်ရေးကတ်အမှတ်

- (ငင) နေရပ်လိပ်စာ
- (ဂ) ဆောက်လုပ်မည့်အဆောက်အအုံလိုအပ်ချက်
- (၁) အဆောက်အအုံအမျိုးအစား/အရေအတွက်
- (၂) အကျယ်အဝန်း:
- (ဃ) နှစ်စဉ်ထုတ်လုပ်မည့် ကုန်ပစ္စည်း/ဝန်ဆောင်မှု
- (င) နှစ်စဉ် လျှပ်စစ်ဓါတ်အားလိုအပ်ချက်.....
- (စ) နှစ်စဉ် ရေလိုအပ်ချက်.....
- မှတ်ချက်။ အပိုဒ် ၁၂(ခ)နှင့်စပ်လျဉ်း၍အောက်ပါအချက်များပူးတွဲတင်ပြရန်-
- (၁) မြေပိုင်ဆိုင်မှု/မြေဂရန်အထောက်အထား(စက်မှုဇုန်မှ အပ)နှင့်မြေပုံ
- (၂) မြေငှားစာချုပ်(မူကြမ်း)

၁၃။ ငွေကြေးပိုင်ဆိုင်မှုနှင့် ပတ်သက်၍ အသေးစိတ်ဖော်ပြချက်-

- (က) အမည်/ ကုမ္ပဏီအမည်
- (ခ) နိုင်ငံသားစိစစ်ရေးကတ်အမှတ်/နိုင်ငံကူးလက်မှတ်အမှတ်
- (ဂ) ဘဏ်စာရင်းအမှတ်.....
- (မိခင်နိုင်ငံရှိဘဏ်ထောက်ခံချက် သို့မဟုတ် မိခင်ကုမ္ပဏီ၏စာရင်းစစ်ပြီးသည့် နှစ်ချုပ်စာရင်းပူးတွဲတင်ပြရန်)

၁၄။ ဆောင်ရွက်မည့် စီးပွားရေးအဖွဲ့အစည်းတွင် လိုအပ်မည့် ဝန်ထမ်းများစာရင်း Exhibit No.X

စဉ်	အဆင့်အတန်း	မြန်မာနိုင်ငံသား	နိုင်ငံခြားသား	စုစုပေါင်း
(က)	အကြီးတန်းစီမံခန့်ခွဲမှု (မန်နေဂျာများ၊ အဆင့်မြင့်အရာရှိများ)		၁	၁
(ခ)	အခြားအဆင့်စီမံခန့်ခွဲမှု (အကြီးတန်းစီမံခန့်ခွဲမှုမှအပ)	၅	၂	၇
(ဂ)	သက်မွေးဝမ်းကျောင်းပညာရှင်များ	၁	၁	၂
(ဃ)	နည်းပညာနှင့်ဆက်စပ်သည့်သက်မွေးပညာရှင်	၇	၂	၉
(င)	အကြံပေး			
(စ)	ကျွမ်းကျင်လုပ်သား	၁၇		၁၇
(ဆ)	အခြေခံလုပ်သား	၆		၆
စုစုပေါင်း		၃၆	၆	၄၂

မှတ်ချက်။ အောက်ဖော်ပြပါ ဖော်ပြချက်များပူးတွဲဖော်ပြရန်

- (၁) လုပ်သားများ၏ လူမှုဖူလုံရေး၊သက်သာချောင်ချိမှုဆောင်ရွက်မည့် အစီအမံများ

(၂) ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းပြုလုပ်မည့် အစီအမံများ

၁၅။ အဆိုပြုချက်နှင့်အတူအောက်ဖော်ပြပါ လျှောက်ထားလွှာများကိုတင်ပြလျှောက်ထားခြင်းရှိ/
မရှိဖော်ပြရန်-

☐ မြေအသုံးပြုခွင့်လျှောက်ထားလွှာ

☐ အခွန်ကင်းလွတ်ခွင့်သို့မဟုတ် သက်သာခွင့်လျှောက်ထားလွှာ

၁၆။ အဆိုပြုရင်းနှီးမြှုပ်နှံမှုလုပ်ငန်းအကျဉ်းချုပ်အား နောက်ဆက်တွဲဖြင့် ဖော်ပြရန်။



လျှောက်ထားသူလက်မှတ်.....

အမည်.....ဦးမောင်ကျေး

ရာထူး.....မန်နေဂျင်းဒါရိုက်တာ

ဌာန/ကုမ္ပဏီတံဆိပ်.....PowerGen Kyaukse Co.,Ltd

ရက်စွဲ-.....

အဆိုပြုရင်းနှီးမြှုပ်နှံမှုလုပ်ငန်းအကျဉ်းချုပ်(နည်းဥပဒေ ၃၈)

၁။ ရင်းနှီးမြှုပ်နှံမှုတွင် တိုက်ရိုက်ဖြစ်စေ၊ သွယ်ဝိုက်၍ဖြစ်စေ အကျိုးစီးပွား သိသာထင်ရှားစွာ ပါဝင်သော အခြားပုဂ္ဂိုလ်များဖော်ပြရန် -

(က) ရင်းနှီးမြှုပ်နှံသူမှ ရရှိမည့် အမြတ်ငွေ ၏ ၁၀ % နှင့် အထက်ကို ပိုင်ဆိုင်ခွင့်ရှိသည့် သို့မဟုတ် ထိန်းချုပ်ခွင့်ရှိသည့် လုပ်ငန်း၏ -

ပူးတွဲတင်ပြအပ်ပါသည်။

(၁) အမည်

(၂) ဆက်သွယ်ရမည့်လိပ်စာ

(၃) မှတ်ပုံတင်အမှတ်

(တစ်ဦး ထက်ပိုပါက နောက်ဆက်တွဲဖြင့် ဖော်ပြရန်)

(ခ) ခွင့်ပြုမည့်ရင်းနှီးမြှုပ်နှံမှုလုပ်ငန်းဆောင်ရွက်ရာတွင်တိုက်ရိုက်ပါဝင်သည့် လက်အောက်ခံ ကုမ္ပဏီများရှိလျှင် အဆိုပါကုမ္ပဏီများ၏အမည်ကို ဖော်ပြရန် -

(၁) Myanmar Chemical & Machinery Company Limited

(၂) SEPCO III Electric Power Construction Company Limited

(၃)

၂။ ရင်းနှီးမြှုပ်နှံမှု၏ အဓိကတည်နေရာ သို့မဟုတ် တည်နေရာများ

မန္တလေးတိုင်းဒေသကြီး၊ ကျောက်ဆည်မြို့နယ်၊

စဉ့်ကိုင်မြို့နယ်၊(၂၃၀)ကေဗေဘဲလင်းခါတ်အားခွဲရုံဝန်းတွင်း

၃။ ရင်းနှီးမြှုပ်နှံမှုလုပ်ငန်းပြုလုပ်မည့်ကဏ္ဍနှင့် ဆောင်ရွက်မည့်စီးပွားရေးလုပ်ငန်းများ ဖော်ပြချက်

(၁၄၅.၄၉) မဂ္ဂါဝပ်

လျှပ်စစ်ခါတ်အားပေးစက်ရုံ တည်ဆောက်/လည်ပတ် ပြုပြင်ထိန်းသိမ်းခြင်းလုပ်ငန်း

၄။ အဆိုပြုထားသော ရင်းနှီးမြှုပ်နှံမှုပမာဏ (မြန်မာကျပ် နှင့် အမေရိကန်ဒေါ်လာ တို့ဖြင့် ဖော်ပြရန်)

USD 92.68 million နှင့်ညီမျှသော ကျပ်သန်း

(၁၂၉,၇၄၉.၃၇)

၅။ ရင်းနှီးမြှုပ်နှံမှု အကောင်အထည်ဖော်မည့် ခန့်မှန်းအချိန်ဇယား အပါအဝင် အစီအစဉ်ဖော်ပြချက် -

- (က) တည်ဆောက်ရေးကာလသို့မဟုတ်
ပြင်ဆင်မှုကာလ (နှစ်၊လတို့ဖြင့်ဖော်ပြရန်) စတင်ခွင့်ပြုချိန်မှ ရက်ပေါင်း (၂၈၆) ရက်
- (ခ) စီးပွားဖြစ်စတင်မည့်ကာလ
(နှစ်၊လတို့ဖြင့်ဖော်ပြရန်) ၂၀၁၉ ခုနှစ်၊ ဖေဖော်ဝါရီလ (၁၇) ရက်

၆။ ခန့်ထားမည့် အလုပ်သမားဦးရေ -

- (က) ပြည်တွင်း ၃၆
- (ခ) ပြည်ပ (ပညာရှင်/ကျွမ်းကျင်သူ) ၆

၇။ ပြည်ပမှ ပြည်တွင်းသို့ ယူဆောင်လာမည့် မတည် ရင်းနှီးမြှုပ်နှံမှုများတွင် ငွေသားဖြင့် ယူဆောင်မှု ပမာဏ (Capital in-Cash)၊ ရင်းနှီးပစ္စည်း အဖြစ်ယူဆောင် လာမည့် ရင်းနှီးငွေပမာဏ (Capital in-Kinds) တို့အား တိကျစွာခွဲခြားသတ်မှတ် ဖော်ပြပေးရန်(မြန်မာကျပ် နှင့် အမေရိကန် ဒေါ်လာ တို့ဖြင့်ဖော်ပြရန်) -

- (က) ငွေသားဖြင့်ယူဆောင်မှုပမာဏ USD (5.75) Million
- (ခ) ပစ္စည်းအဖြစ်ယူဆောင်လာမည့်
ရင်းနှီးငွေပမာဏ USD (74.94) Million

မှတ်ချက်။ ရင်းနှီးမြှုပ်နှံသူသည် ရင်းနှီးမြှုပ်နှံမှုနှင့် သက်ဆိုင်သော လျှို့ဝှက်ထိန်းသိမ်းရမည့် သတင်း အချက်အလက်များအား ထုတ်ပြန်ခြင်းမှ ရှောင်ကြဉ်ရန် ကော်မရှင်ထံ တင်ပြတောင်းဆိုနိုင်သည်။

ကတိဝန်ခံချက်

အထက်ဖော်ပြပါ လျှောက်ထားသူမှပေးအပ်သည့် အချက်အလက်များအားလုံးသည် မှန်ကန်မှု ရှိကြောင်းအာမခံပါသည်။

ဤအဆိုပြုချက်တွင် ခွင့်ပြုမိန့်ထုတ်ပေးရန်အတွက် ကော်မရှင်မှ စိစစ်ရာ၌ လိုအပ်သည့် အချက်အလက်များကို လျှောက်ထားသူကပေးအပ်ရန် ပျက်ကွက်ပါက အဆိုပြုချက်ကို ငြင်းပယ်ခြင်း သို့မဟုတ် စိစစ်ရာ၌ မလိုလားအပ်သည့် နှောင့်နှေးကြန့်ကြာခြင်းတို့ ဖြစ်ပေါ်နိုင်ကြောင်း ကောင်းစွာ သဘောပေါက်နားလည်ပါသည်။

မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်မှ ချမှတ်မည့် စည်းမျဉ်းစည်းကမ်းများကိုလည်း လိုက်နာ မည်ဖြစ်ကြောင်းဝန်ခံကတိပြုအပ်ပါသည်။

လျှောက်ထားသူလက်မှတ်.....

အမည်ဦးမောင်ကျေး

ရာထူးမန်နေဂျင်းဒါရိုက်တာ

ဌာန/ကုမ္ပဏီတံဆိပ်PowerGen Kyaukse Co.,Ltd

Proposal Form

To,

Chairman

Myanmar Investment Commission

Reference No. PGK/KS-135/MIC- /2018

Date. 2018 August

I do apply for the permission to make investment in the Republic of the Union of Myanmar in accordance with the Section 36 of the Myanmar Investment Law by furnishing the following particulars:-

1. The Investor's:-

- (a) Name U Maung Kyay
- (b) Father's name U Khin Ngar @ U Khin Shein
- (c) ID No./National Registration Card No./Passport No. 12/LaThaNa(N)018174
- (d) Citizenship Myanmar
- (e) Address:
- (i) Address in Myanmar No.(C-4), Mon Myat Myit Thar Residence, Pin Shwe Nyaung Street, Tamwe Township, Yangon.
- (ii) Residence abroad
- (f) Phone /Fax Ph: 01-8610654, 8610656/ Fax : 01-295067
- (g) E-mail address maungkyay@national-infra.com
- (h) Name of principle organization National Infrastructure Holdings Co., Ltd (NIHC)
- (i) Type of Business Electricity Generation
- (j) Principle company's address: No.(36), Thein Phyu Street, Pazundaung Township, Yangon.

2. If the investment business is formed under Joint Venture, partners':-

- (a) Name Myanmar Chemical and Machinery Co., Ltd (MCM)
- (b) Father's name SEPCOIII Electric Power Construction Co., Ltd (SEPCOIII)
- (c) ID No./ National Registration Card No./Passport No. MCM Company Registration No- 668/2001-2002
SEPCOIII Company Registration No - 913702121654224203
- (d) Citizenship MCM.(Myanmar), SEPCOIII.(Chinese).

- (e) Address: MCM - No.1120-1121, Thumingalar Street, 16/4 Ward, Thingangyun
(i) Address in Myanmar T/W, Yangon
(ii) Residence abroad SEPCOIII- No.882/1, Tong'an Road, Laoshan District, Qingdao, China.
(f) Parent company
(g) Parent company's address

Note: The following documents need to be attached according to the above paragraph (1) and (2):-

- (1) Company registration certificate (copy);
(2) National Registration Card (copy) and passport (copy);
(3) Evidences about the business and financial conditions of the participants of the proposed investment business;

3. If the investor don't apply for permission to make investment by himself/herself, the applicant;

- (a) Name
(b) Name of Contact Person
(if applicant is business organization)

Remark: To submit the official letter of legal representative as attachment

- (c) ID No./ National Registration Card No./Passport No.
(d) Citizenship
(e) Address in Myanmar:
(f) Phone / Fax :
(g) E-mail :

4. Type of proposed investment business:-

5. Type of business organization to be formed:-

- ☐ One Hundred Percent ☐ Joint Venture (To attach the draft of JV agreement)
☐ Type of Contractual basis (To attach contract (agreement) draft)

6. List of shareholders

No	Name of Shareholder	Citizenship	Share Percentage
1	National Infrastructure Holdings Co.,Ltd	Myanmar	54%
2	Myanmar Chemical & Machinery Co.,Ltd	Myanmar	37%
3	SEPCOIII Electric Power Construction Co.,Ltd	Chinese	9%

7. Particulars of Company incorporation

- (a) Authorized Capital USD - One Million
- (b) Type of Share 1 share = 1 USD, Share = 1,000,000
- (c) Number of Shares

Note: Memorandum of Association and Articles of Association of the Company shall be submitted with regard to above paragraph 7.

8. Particulars of Paid-up Capital of the investment business

	Kyat/US\$ (Million)	
(a) Amount/percentage of local capital to be contributed	<u>16,804.86 (13%) / US \$ - 12.00</u>	
(b) Amount/percentage of foreign capital to be brought in	<u>112,944 (87%) / US \$ - 80.68</u>	
Total	<u>129,749.37</u>	<u>US \$ - 92.68</u>
(c) Annually or period of proposed capital to be brought in	<u>One Year</u>	
(d) Value /Amount of investment	<u>USD 92.68 Million</u>	
(e) Investment period	<u>(5) Years/Extension as per requirement of Department/To fulfill the Electricity requirement for the Industrial Zone (or) Special Economic Zone in the Regional Ar</u>	
(f) Construction /Preparation period	<u>(286) Days</u>	

Note: Describe with annexure if it is required for the specific condition in regard to the above Paragraph 8 (e).

9. Detailed list of foreign capital to be brought in -

	Foreign Currency (Million)	Equivalent Kyat (Million)
(a) Foreign currency (Type and Value)	<u></u>	<u></u>
(b) Machinery and equipment (to enclose detailed list)	<u>74.94</u>	<u>104,912.34</u>

(c) The value of initial raw materials and other similar materials (to enclose detailed list)	.....	.....
(d) Value of license, intellectual property, industrial design, trade mark, patent, etc.	.....	.....
(e) Value of technical know-how	5.74	8,032.18
(f) Others(eg: Construction materials)	.....	.....
Total	80.68	112,944

Remark: The evidence of permission shall be submitted for the above paragraph 9 and (e).

10. Details of local capital to be contributed -

	Kyat (Million)
(a) Amount	6,196.99
(b) Value of machinery and equipment (to enclose the detailed list)	.....
(c) Value or rental rate of land and buildings	.....
(d) Cost of building construction	10,547.87
(e) Value of furniture and assets (to enclose the detailed list)	.....
(f) Value of initial raw material (to enclose the detailed list)	.....
(g) Others	60
Total	16,804.86

11. Particulars of Loans-

<input type="checkbox"/> Loan (local)	..... Kyat(s)
	..... US\$
<input type="checkbox"/> Loan (abroad)	63.86 Million US\$

12. Particulars about the Investment Business -

- (a) Investment location(s)/place (230KV) Bellin Substation Compound, Kyaukse District,
..... Mandalay Region.
- (b) Type and area requirement for land or land and building
- (i) Location (230 KV) Bellin Substation Compound, Kyaukse District, Mandalay Region.
- (ii) Area and number of land/building (10.12) Acre
- (iii) Owner of the land Ministry of Electricity and Energy
- (aa) Name/company/department
- (bb) National Registration Card No.
- (cc) Address
- (iv) Type of land
- (v) Period of land lease contract
- (vi) Lease period From To () year
- (vii) Lease rate
- (aa) Land
- (bb) Building
- (viii) Ward
- (ix) Township
- (x) State/Region
- (xi) Lessee
- (aa) Name/ Name of Company/ Department
- (bb) Father's name
- (cc) Citizenship
- (dd) ID No./Passport No.
- (ee) Residence Address

Note: The following documents have to be enclosed for above Paragraph 12 (b)

- (i) to enclose land ownership and ownership evidences(except industrial zone) and
land map;
- (ii) land lease agreement(draft);
- (c) Requirement of building to be constructed;
- (i) Type / number of building
- (ii) Area
- (d) Annual products to be produced/ Services Electricity

- (e) Annual electricity requirement
- (f) Annual requirement of water supply

13. Detailed information about financial standing - (Attached)

- (a) Name/company's name
- (b) ID No./National Registration Card No./Passport No.
- (c) Bank Account No.

Remark: To enclose bank statement from resident country or annual audit report of the principle company with regard to the above paragraph 13.

14. List of Employment:- Exhibit No. X

Item	Designation /Rank	Citizen	Foreign	Total
a	Senior management (Managers, senior officials)			1
b	Other management level (Except from senior management)	2		3
c	Professionals	1	2	3
d	Technicians	7	2	9
e	Advisors			
f	Skilled Labour	16		16
h	Workers	7		7
Total		36	6	42

The following information shall be enclosed: -

- (i) Social security and welfare arrangements for all employees;
- (ii) Evaluation of environmental impact arrangements

15. Describe whether other Applications are being submitted together with the Proposal or not :

- ☐ Land Rights Authorisation Application
- ☐ Tax Incentive Application

16. Describe with annexure the summary of proposed investment.



Signature of the applicant

Name: U Maung Kyay

Title: Managing Director

Department /Company PowerGen Kyaukse Co.,Ltd
(Seal/Stamp)

Date: 2018, August

Summary of Proposed Investment (Rule 38)

1. Please describe any other person who has a significant direct or indirect interest in the investment.

(a) Please describe an Enterprise or individual who are entitled to possess more than 10% of the profit distribution:

(1) Name

(2) Address

(3) Company Registration No. or
N.R.C No./ Passport No.

(b) If there is directly participated Subsidiary in carrying out the proposed investment, please describe the name of that companies:

(1) Myanmar Chemical & Machinery Company Limited

(2) SEPCO III Electric Power Construction

(3)

2. The principal location or locations of the investment: (230 KV) Bellin Substation Compound, Kyaukse District, Mandalay Region.

3. A description of the sector in which the investment is to be made and the activities and operations to be conducted: Develop, Own and operate a (145.49) MW Gas Power Plant for generating of electricity including provision of operation and maintenance service

4. The proposed amount of the investment (in Kyat and US\$) 129,749.37 Million Kyat equivalent to 92.68 Million US\$

5. A description of the plan for the implementation of the Investment including expected timetable:

(a) Construction or Preparatory Period
(Describe MM/YY)

286 Days from Commencement Date

(b) Commercial Operation Date (Describe
MM/YY)

17th February, 2019

6. Number of employees to be appointed:

(a) Local

36

(b) Foreign (Expert/ Technician)

6

7. Please specify the detailed list of foreign capital (Capital in-Cash and Capital in-Kinds) in Kyat and US\$:

(a) Capital in-cash to be brought in USD 5.74 Million

(b) Capital in-kind to be brought in USD 74.94 Million


Note: The investor may request the Commission to refrain from publishing commercial-in-confidential information of its investment.

Undertaking

I / We hereby declare that the above statements are true and correct to the best of my/our knowledge and belief.

I / We fully understand that proposal may be denied or unnecessarily delayed if the applicant fails to provide required information to access by Commission for issuance of permit.

I/We hereby declare to strictly comply with terms and conditions set out by the Myanmar Investment Commission.

Signature of the applicant 

Name: U Maung Kyay

Title: Managing Director

Department /Company PowerGen Kyaukse Co.,Ltd
(Seal/Stamp)

Date: 2018, August,

မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်သို့

(ခ) အခွန်ကင်းလွတ်ခွင့် (သို့) သက်သာခွင့်
လျှောက်ထားချက် -ပုံစံ (၆)

Exhibit No- I**LIST OF EXECUTIVE DIRECTORS OF “POWERGEN KYAUKSE COMPANY LIMITED”**

Sr. No	Name	Designation	N.R.C No./PP No.	Address
1.	U Maung Kyay	Managing Director	12/ LaThaNa (Naing) 018174	No.(C-4), Mon MyatMyittar Residence, Pin Shwe Nyaung Street, Tamwe Township, Yangon.
2.	U Than Myint	Director	12/LaMaTa (Naing) 027772	No.45/A, 6 1/2 miles, Pyay Road, Hlaing Township, Yangon.
3.	U Aung Hlaing Oo	Director	12/LaMaTa (Naing) 025897	No. 1120-1121, Thu Mingalar Street, 16/4, Ward, Thingangyun Township, Yangon
4.	Daw Noe Noe Su Aung	Director	12/ThaGaKa (Naing) 185395	No. 1120-1121, Thu Mingalar Street, 16/4, Ward, Thingangyun Township, Yangon.
5.	Mr. Zhang Yushi	Director	Passport No. G 49052786	No. 882-1 Tong'an Road, Laoshan District, Qingdao, China.



နိုင်ငံသားစိစစ်ရေးကော်မရှင်

အမှတ် ၁၂/လသာ (၂) ဇီဝဝေလှေ

ရက်စွဲ ၂၀.၆.၂၀၁၆

အမည် ဟိန္ဒူ ဂေါတမီ ဦးစော

အမည်အရင်း ဦးစော ဂေါတမီ

မွေးသက္ကရာဇ် ၂.၄.၁၉၅၄

မြို့/ရပ်ကွက်/အထွေထွေ အရပ် ၂

ထုတ်ပေးသောကုန်ပစ္စည်း

အရပ် ၂

အမည် ဦးစော ဂေါတမီ

ရာထူး

ဦးစော ဂေါတမီ

G400133



နိုင်ငံသားစိစစ်ရေးကော်မရှင်

အမှတ် ၁၂/လသာ (၂) ဇီဝဝေလှေ

ရက်စွဲ ၂၀.၆.၂၀၁၆

အမည်အရင်း ဦးစော ဂေါတမီ

အမည်အရင်း ၁၂(က) ပင်လုံမြို့နယ်

ဦးစော ဂေါတမီ

ထုတ်ပေးသောကုန်ပစ္စည်း

အမည်အရင်း ဦးစော ဂေါတမီ

အမည်အရင်း ၁၂(က) ပင်လုံမြို့နယ်

ဦးစော ဂေါတမီ

ထုတ်ပေးသောကုန်ပစ္စည်း

တပ်မတော် သမ္မတမြန်မာနိုင်ငံတော်
နိုင်ငံသားစိစစ်ရေးကတ်ပြား

ဓာတ်ပုံ/ရုပ်ပုံ/ဓာတ်ပုံ ၀၂၇၇၂၂

ရက်စွဲ ၃.၃.၂၀၁၂

အမည် ဦးသန်းမြင့် (မ) ဦးတင်စိန်

အဘွားအမည် ဦးစိုးစိုး

မွေးသက္ကရာဇ် ၁၁.၁၁.၁၉၄၈

လူမျိုး/ဘာသာ ကရုဏ်း/ဗုဒ္ဓ

အရပ် ၂၆ မြို့နယ်အုပ်စု

ထင်ရှားသည့်အမှတ်အသား ဦးစိုးစိုးလွင်

အသား ၀၁၈၇၀၇၇

ထုတ်ပေးသည့်ရက်စွဲ

ရက်စွဲ ၃.၃.၂၀၁၂

ရက်စွဲ ၃.၃.၂၀၁၂

အမှတ်စဉ် T.679290 ပဏ ၃၇၆၁/၇၂

အမည် ဦးစိုးစိုး

အဘွားအမည် ဦးစိုးစိုး

ဓာတ်ပုံ/ရုပ်ပုံ/ဓာတ်ပုံ

အရပ်အကွက် ကျောက်သုဉ်း

အရပ်အကွက် ၄၁. A. မြို့နယ်

အရပ်အကွက် ၁၁၇၀၇၇၇

ထုတ်ပေးသည့်ရက်စွဲ

၁။ ဤကတ်ပြားကို အမြဲဆောင်ထားရမည်။

၂။ နောက်ဆုံးပုံစံသို့ အသုံးပြုရန် အသုံးပြုရန် အသုံးပြုရန် အသုံးပြုရန်

၃။ ဤကတ်ပြားကို အသုံးပြုရန် အသုံးပြုရန် အသုံးပြုရန် အသုံးပြုရန်

နိုင်ငံသားစိစစ်ရေးကော်မရှင်

အမှတ် ၂ / သယံက (နိုင်) ခရစ္စတု ၉၇

ရက်စွဲ ၂၆.၃.၂၀၁၈

အမည် ပုဂ္ဂိုလ်သုတေသန

ဖခင်အမည် ဦးအောင်နိုင်

မွေးသက္ကရာဇ် ၁၆.၁.၁၉၆၉

လူမျိုး/ဘာသာ ကရင်/ဗမာ

အရပ် ၅.၄၂ သွေးစုစု

ထင်ရှားသည့်အမှတ်အသား ဝိန်းအောင်မြိုင်

ရာထူး လဝက-၁၆၉၉၀

ညွှန်ကြားရေးမှူး

အမှတ်စဉ် AF 186820

သက်ဆောင်ကွက်ပြားအမှတ်

အလုပ်အကိုင်

နေရပ်လိပ်စာ

ဖုန်းနံပါတ်

ထိုးမြဲလက်မှတ်

၁။ ဤကတ်ပြားကို အမြဲဆောင်ထားရမည်။

၂။ ပျောက်ဆုံး၊ ပျက်စီးသည်အခါ သက်ဆိုင်ရာ ခရီးစဉ်၊ လူဝင်မှုကြီးကြပ်ရေးနှင့် ပြည်သူ့အင်အားဆိုင်ရာ မြို့နယ်ဦးစီးမှူးရုံးသို့ သတင်းပို့ရမည်။

၃။ ဤကတ်ပြားကို အသက် () နှစ်ပြည့်လျှင် လဲလှယ်ရမည်။ ပျက်ကွက်ပါက အရေးယူခြင်းခံရမည်။

The Ministry of Foreign Affairs of the People's Republic of China requests all civil and military authorities of foreign countries to allow the bearer of this passport to pass freely and afford assistance in case of need.

649052788



Figure 1

FIGURE 2

0115 960 000 - Phone 44 0115

10176 J.L.M.H. — 2008 — 19 pages — 10 pages of figures.

[illegible]

山东 / SHANDONG

截止日期: 2009年10月15日

自備則於 1990 年 10 月 1 日

02 MAR 2021

DEPT. OF HEALTH

Exit & Entry Administration
Ministry of Public Security

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P0CHNZHANG<<YUSHI<<<<<<<<<<<<<<<<<<<<<<<
G49D527869CHN6510293M210302019203707<<<<<3D

အခွန်ကင်းလွတ်ခွင့် သို့မဟုတ် သက်သာခွင့်လျှောက်ထားလွှာ

သို့

ဥက္ကဋ္ဌ

မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်

စာအမှတ်၊ PGK /KS-135/MIC- /2018

ရက်စွဲ ၂၀ ခုနှစ်၊ ဩဂုတ်လ ရက်

အကြောင်းအရာ။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုဥပဒေအရ အခွန်ကင်းလွတ်ခွင့် သို့မဟုတ် သက်သာခွင့် လျှောက်ထားခြင်း

ကျွန်တော်/ကျွန်မသည် မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုဥပဒေ ပုဒ်မ ၇၄ အရ အခွန်ကင်းလွတ် ခွင့် သို့မဟုတ် သက်သာခွင့်များ ခံစားခွင့်ရရှိရေးအတွက် အောက်ဖော်ပြပါအချက်များအား ဖြည့်စွက်၍ လျှောက်ထားအပ်ပါသည်။

၁။ ရင်းနှီးမြှုပ်နှံသူ၏

(က) အမည်	ဦးမောင်ကျေး
(ခ) ကုမ္ပဏီအမည်	ပါဝါကျွန် ကျောက်ဆည် ကုမ္ပဏီ
(ဂ) လုပ်ငန်းအမျိုးအစား	လျှပ်စစ်ဓာတ်အားထုတ်လုပ်ခြင်းလုပ်ငန်း
(ဃ) ခွင့်ပြုမိန့်အမှတ် သို့မဟုတ် အတည်ပြု မိန့်အမှတ် (လျှောက်ထားဆဲဖြစ်ပါက လျှောက်ထားဆဲဖြစ်ကြောင်းဖော်ပြရန်)	အတည်ပြုမိန့်လျှောက်ထားဆဲဖြစ်ပါသည်။

၂။ ရင်းနှီးမြှုပ်နှံသူကိုယ်တိုင်လျှောက်ထားခြင်း

မဟုတ်ပါကလျှောက်ထားသူ၏

(က) ဆက်သွယ်ရမည့် ပုဂ္ဂိုလ်အမည်	ဦးမောင်ကျေး
(ခ) နိုင်ငံသားစိစစ်ရေးကတ်/ နိုင်ငံကူးလက်မှတ် အမှတ်	၁၂/လသန(နိုင်)၀၁၈၁၇၄

၃။ တည်ဆောက်မှုကာလ/ပြင်ဆင်မှုကာလ

	(၂၈၆) ရက်
--	-----------

၄။ စီးပွားဖြစ်စတင်ဆောင်ရွက်သည့်နေ့

	စတင်ထုတ်လုပ်သည့်နေ့မှစ၍
--	-------------------------

၅။ အောက်ပါအခွန်ကင်းလွတ်ခွင့် သို့မဟုတ် သက်သာခွင့်ကိုခံစားခွင့်ပြုနိုင်ပါရန် လျှောက်ထား အပ်ပါသည်-

- | | |
|-----|---|
| (က) | မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုဥပဒေပုဒ်မ ၇၅ (က)ပါ ဝင်ငွေခွန်ကင်းလွတ်ခွင့် |
| (၁) | ပြည်ပမှဝယ်ယူတင်သွင်းသည့် စက်ပစ္စည်းကိရိယာများ၊ လုပ်ငန်းသုံးပစ္စည်းအတွက် အကောက်ခွန်နှင့် ပြည်တွင်းအခွန်အကောက်များကင်းလွတ်ခွင့် |
| (၂) | ဝင်ငွေခွန်သက်သာခွင့် |

မှတ်ချက်။ မိမိလျှောက်ထားလိုသည့် ကင်းလွတ်ခွင့်နှင့် သက်သာခွင့်များကို
ဖော်ပြရန်။

- ၆။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုဥပဒေပုဒ်မ ၇၅(က)ပါဝင် -----
ငွေခွန်ကင်းလွတ်ခွင့် လျှောက်ထားမည် ဆိုပါက -----
နည်းဥပဒေ ၈၃ နှင့် အညီ လုပ်ငန်းဆောင်ရွက် -----
နေသည့်ဇုန်နေရာ သို့မဟုတ် နည်းဥပဒေ ၉၆ -----
နှင့်အညီ တွက်ချက်ထားသော ရင်းနှီးမြှုပ်နှံမှု ----- ဇုန် (၂)
လုပ်ငန်းတန်ဖိုး ၆၅ ရာခိုင်နှုန်း အထက်အား -----
ရင်းနှီးမြှုပ်နှံ ထားသည့်သို့မဟုတ် လုပ်ငန်း -----
ဆောင်ရွက်နေသည့် ဇုန်နေရာကို ဖော်ပြပေးရန်။
- ၇။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုဥပဒေ ပုဒ်မ ၇၇ (က) နှင့် (ဃ) ကိုလျှောက်ထားမည် ဆိုပါက နည်းဥပဒေ
၈၄ ပါအချက်အလက်များကို ဇယား(၁) တွင်ဖြည့်စွက်ရန်
- ၈။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုဥပဒေပုဒ်မ ၇၇ (ခ) အရ အခွန်ကင်းလွတ်ခွင့်နှင့် သက်သာ
ခွင့်လျှောက်ထားမည်ဆိုပါက ဇယား (၂) နှင့်အောက်ပါအချက်အလက်များကို ဖော်ပြပေးအပ်ရန်-
- (က) ရင်းနှီးမြှုပ်နှံမှုလုပ်ငန်းမှ ရရှိမည့် တစ်နှစ် -----
စာမျှော်မှန်းဝင်ငွေ
(ခ) ပို့ကုန်များမှရရှိသော တစ်နှစ်စာ နိုင်ငံခြားငွေ -----
- ၉။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုဥပဒေ ပုဒ်မ ၇၈(က)အရ ကင်းလွတ်ခွင့်နှင့် သက်သာခွင့် လျှောက်ထားမည်
ဆိုပါက နည်းဥပဒေ ၉၉ နှင့်အညီ တစ်ဖက်ပါအချက်အလက်များကို ဖော်ပြပေးအပ်ရန်-
- (က) မည်သည့်ဘဏ္ဍာနှစ်အတွက်ရရှိခဲ့သည် -----
အမြတ်ငွေဖြစ်ကြောင်းဖော်ပြရန်။
(ခ) မည်သည့်ဘဏ္ဍာနှစ်အတွက် ပြန်လည် -----
ရင်းနှီးမြှုပ်နှံလိုကြောင်းဖော်ပြရန်။
(ဂ) ပြန်လည် ရင်းနှီးမြှုပ်နှံမည့် ပမာဏကို -----
ဖော်ပြပေးရန်။
- ၁၀။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုဥပဒေ ပုဒ်မ ၇၈(ခ) အရ ကင်းလွတ်ခွင့်နှင့် သက်သာခွင့် လျှောက်ထားမည်
ဆိုပါကအောက်ပါအချက်အလက်များကိုဖော်ပြပေးအပ်ရန် -
- (က) နိုင်ငံတော်၏ သက်ဆိုင်ရာ ဥပဒေများအရ ခွင့်ပြုထားသည့် ပစ္စည်း တန်ဖိုး
လျှော့တွက်နှုန်းထားနှင့် ၎င်းနှုန်းထား၏ ၁.၅ ဆနှင့် တူညီသည့် ပစ္စည်းတန်ဖိုး
လျှော့တွက်နှုန်းထားတို့ကို ယှဉ်တွဲတွက်ချက် ဖော်ပြထားသည့် ပစ္စည်းတန်ဖိုး
လျှော့တွက်နှုန်းထားတွက်ချက်မှုကိုပူးတွဲတင်ပြရန်။
(ခ) ရင်းနှီးမြှုပ်နှံသူသည် ပစ္စည်းတန်ဖိုး လျှော့တွက်နှုန်းထားကို တွက်ချက် ခံစားခွင့်အတွက်

အခြားသက်ဆိုင်ရာ အစိုးရဌာန၊ အစိုးရအဖွဲ့အစည်းထံ သီးခြားလျှောက်ထားခြင်း သို့မဟုတ် ရရှိထားခြင်းရှိမရှိ။

- ၁၁။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုဥပဒေပုဒ်မ ၇၈(ဂ)အရ ကင်းလွတ်ခွင့်နှင့် သက်သာခွင့် လျှောက်ထားမည် ဆိုပါကဘဏ္ဍာနှစ်အတွက် သုတေသနနှင့်ဖွံ့ဖြိုးရေးလုပ်ငန်းများ၏ အခွန်တကယ်ကုန်ကျစရိတ်ကို စာရင်းပြုစု၍ပူးတွဲတင်ပြရန်။

လျှောက်ထားသူလက်မှတ်
အမည် MAUNG KYAY
ရာထူး MANAGING DIRECTOR
ဌာန/ကုမ္ပဏီတံဆိပ် POWERGEN KYAUKSE CO., LTD.

ဇယား (၁) - ထုတ်လုပ်မှုအတွက်လိုအပ်သည့်ပစ္စည်းများစာရင်း

စဉ်	ပစ္စည်းအမျိုးအမည်	HS Code (ဂဏန်း၄လုံးဖြင့်ဖော်ပြရန်)	ရေတွက်ပုံ	အရေအတွက်	တစ်ခုချင်းတန်ဖိုး	စုစုပေါင်းတန်ဖိုး	ပင်ရင်းနှီးငွေ	
							ပြည်တွင်း	ပြည်ပ
	၁	၂	၃	၄	၅	၆	၇	၈
	စုစုပေါင်း							

မှတ်ချက်။ Brand New / Reconditionedခွဲခြားဖော်ပြပေးရန်။

ဇယား(၂) - ထုတ်လုပ်မှုအတွက် လိုအပ်သည့် သွင်းအားစုစာရင်း

စဉ်	ပစ္စည်းအမျိုးအမည်	HS Code (ဂဏန်း၄လုံးဖြင့်ဖော်ပြရန်)	ရေတွက်ပုံ	တစ်ခုချင်း တန်ဖိုး (အမေရိကန် ဒေါ်လာ)	တစ်နှစ်အတွက်လိုအပ်မှု				အခြား
					ပြည်တွင်း		ပြည်ပ		
					အရေအတွက်	စုစုပေါင်း (အမေရိကန် ဒေါ်လာ)	အရေအတွက်	စုစုပေါင်း (000' အမေရိကန် ဒေါ်လာ)	
	၁	၂	၃	၄	၅	၆	၇	၈	၉
1	Lubricating Oil		Lit				295,680,000	917.63	
	စုစုပေါင်း						295,680,000	917.63	

Tax Incentive Application

To

Chairman
Myanmar Investment Commission

Ref.No: NIHC/KS-135/MIC- /2018

Dated : 2018 August

Subject : **Application for Tax Incentive**

I do hereby apply with the following particulars for the tax incentive under section 74 of Myanmar Investment Law:


1. Applicant
 - (a) Name of Investor U Maung Kyay
 - (b) Name of Company PowerGen Kyaukse Company Limited
 - (c) Type of Business Power Purchase 145.49 MW Gas Engine Power
 - (d) Myanmar Investment Commission
Permit or Endorsement No. (If a permit or endorsement is still processing, please describe the information.) Endorsement is still processing
2. If investor doesn't submit by himself/herself, the applicant's;
 - (a) Name of contact Person U Maung Kyay
 - (b) National Registration Card No/ 12/LaThaNa(N)018174
Passport No _____
3. Construction period or Preparatory period (286)days from Commencement Date
4. Commencement date for commercial operation 17th February 2019
5. Applied for the following tax incentive:
 - (a) Exemption or Relief under section 75(a)
 - (1) Tax incentive for the machinery and equipment import from abroad Exhibit No.II A, B
 - (2) Income tax exemption

Note: The application must specify precise tax incentives applied for.

6. If the investor apply for tax incentive under section 75 (a), Please state the Zone in accordance rule 83 or the Zone in which more than 65% of the value of the investment is invested or carried out in accordance with rule 96.

Zone (2)

7. If the investor apply for tax incentive under section 77 (a) and (d), please fill the information in schedule (1).
8. If the investor apply for tax incentive under section 77(b), Please state the following information and fill in schedule (2):
 - (a) an expected amount as per year to be -----
earned from the investment
 - (b) Foreign Currency from export as per -----
year
9. If the investor apply for tax incentive under section 78 (a), please state the following information in accordance with rule 99:
 - (a) Please describe, which financial year -----
the profits reinvested are earning by
the investor.
 - (b) Please describe which financial year -----
the profits are reinvested by the
investor.
 - (c) Please describe the amount of -----
reinvestment
10. If the investor apply for tax incentive under section 78 (b), please describe the following information:
 - (a) Provide the depreciation schedule of assets for which the depreciation rate is to be
adjusted, showing both the depreciation at the standard rate and at a rate of 1.5
times the depreciation rate permitted under the relevant laws of the Union.
 - (b) Has the investor separately applied for or obtained an adjustment to the
depreciation rate from the relevant authority.
11. If the investor apply for tax incentive under section 78 (c), provide an itemized list of
actual research and development expenses for the current financial year.


 Signature -----
 Name of Investor **MANAGING DIRECTOR**
POWERGEN KYAUKSE CO., LTD.
 Designation -----
 Department/Company -----
 (Seal/Stamp)

SCHEDULE (1)- LIST OF PRODUCTION EQUIPMENTS NEEDED

NO	LIST OF ITEM	HS CODE (WITH FOUR DIGIST)	UNIT	QUANTITY	UNIT PRICE (USD)	TOTAL VALUE	SOURCE	
							LOCAL	IMPORT
	1	2	3	4	5	6	7	8
	TOTAL							

Note : Please specify the brand new item or reconditioned item.

SCHEDULE (2) – LIST OF PRDUCTION INPUT NEEDED

NO.	LIST OF ITEM	HS CODE (WITH FOUR DIGIST)	UNIT	UNIT PRICE(USD)	ANNUAL NEEDS				OTHER
					LOCAL		IMPORT		
					QUANTIT Y	TOTAL VALUE (USD)	QUANTIT Y	TOTAL VALUE (000'USD)	
	1	2	3	4	5	6	7	8	9
1	Lubricating oil		Lit				295,680,000	917.63	
	TOTAL						295,680,000	917.63	

မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်သို့

(ဂ) နောက်ဆက်တွဲ ဓာရင်းပေးများ

(၁) ရင်းနှီးမြှုပ်နှံမှုပမာဏနှင့် ခက်ပစ္စည်းကိရိယာဓာရင်း

145.49 MW Gas Engine Power Plant Project
Investment Cost

Million USD

No.	Particular	Amount			Total amount, USD	Remarks
		Ks	Equivalent (USD)	USD		
1	2	3	4	5	6	7
1	Power Plant (Main equipment and installation)					
1.1	Gas Engine and generation			57.11	57.11	Need to be imported
1.2	Electrical system supply including equipment and material			5.23	5.23	Need to be imported
1.3	Instrumentation & Control systems supply including equipment and material			1.03	1.03	Need to be imported
1.4	Balance of Power Plant			6.53	6.53	Need to be imported
1.5	Steel structures supply for all buildings and structure			3.16	3.16	Need to be imported
2	Civil Construction work	7672.76	5.48		5.48	
3	Erection & installation service			2.56	2.56	
4	Domestic material supply	2417.37	1.73		1.73	
5	Soil investigation			1.17	1.17	
6	Gas Infra (NPT)	457.74	0.33	1.88	2.21	Need to be imported (1.88 M\$ out of 2.21 M\$)
7	EIA	60.00	0.04		0.04	
8	Consultancy Fee			2.00	2.00	
9	Interest during construction	3631.60	2.59		2.59	
10	Working capital	2565.39	1.83		1.83	
	Total	16,804.86	12.00	80.675	92.678	

Note: Exchange rate : 1\$ = 1,400 Ks

List of Material, Machinery & equipment to be imported

Exhibit No.II A

S/N	Item Description	Unit	QTY.	Unit Price	Price	HS Code (Customs Declaration)	Remark
1	Gas Engine & Auxiliary Equipment					8411820000	
1.1	Gas Engine	SET	8	4,193,871.01	33,550,968.11		
1.1.1	Interior of gas engine	SET	8	134,032.25	1,072,257.98		
1.1.2	Auxiliary module of gas engine	SET	8	91,354.84	730,838.70		
1.1.3	Smoke exhausting module of gas engine	SET	8	79,427.42	635,419.35		
1.1.4	Auxiliary module platform of gas engine	SET	8	62,500.00	500,000.00		
1.1.5	Internal overhaul platform of main building	SET	8	100,000.00	800,000.00		
1.1.6	Steel structure of main building	SET	8	128,074.79	1,024,598.35		
1.1.7	Gas Engine Foundation bolts	SET	1	50,000.00	50,000.00		
1.2	Auxiliary equipment of internal combustion engine generator unit	SET	8	81,250.00	650,000.00		
1.2.1	Lube oil system	SET	1	522,338.74	522,338.74		
1.2.2	Cooling system	SET	1	790,410.00	790,410.00		
1.2.3	Main building Lifting facilities	SET	1	124,655.70	124,655.70		
1.3	Gas Turbine Turning Device	SET	1	85,000.00	85,000.00		
1.4	Oil-water separation system	SET	1	750,000.00	750,000.00		
1.5	Flue of gas engine	SET	1	212,568.45	212,568.45		
1.6	Insulation of gas engine	SET	1	30,000.00	30,000.00		
1.7	Battery of gas engine	SET	1	50,000.00	50,000.00		
1.8	Platform & Handrail	SET	1	30,000.00	30,000.00		
1.9	Valve	SET	1	400,000.00	400,000.00		
1.10	Main Fuel Oil Pump	SET	1	200,000.00	200,000.00		
1.11	Purge Air Compressor	SET	1	150,000.00	150,000.00		
1.12	Water Injection Pump	SET	1	150,000.00	150,000.00		
1.13	Spare parts	SET	1	1,314,128.93	1,314,128.93		
1.13.1	First Partial			-	-		
1.13.2	Second Partial			-	-		
1.13.3	Third Partial			-	-		
1.13.4	Fourth Partial			-	-		
1.13.5	Fifth Partial			-	-		
2	Water Treatment System						
2.1	Make-Up Water Treatment System Equipment	SET	1	27,000.00	27,000.00	8421219990	
2.2	Demineralized water system	SET	1	19,499.07	19,499.07		
2.2.1	Demineralized water tank	SET	1	9,086.95	9,086.95		
2.2.2	Demineralized water pump	SET	1	7,572.46	7,572.46		
2.2.3	CO2 absorber	SET	1	2,839.67	2,839.67		
2.3	Chemical Dosing System Equipment	SET	1	47,327.85	47,327.85	8404101090	
2.4	Potable sewage water treatment system equipment	SET	1	41,152.10	41,152.10	8421219990	
2.5	Industrial wastewater treatment system equipments	SET	1	3,786.23	3,786.23	8421219990	
2.6	Oil waste water treatment equipment	SET	1	97,684.68	97,684.68	8421219990	
2.7	Spare parts	SET	1	30,310.00	30,310.00		
	First Partial			-	-		
	Second Partial			-	-		
2.9	Miscellaneous of pumps for water treatment System	SET	1	50,000.00	50,000.00	8413709990	
2.10	Miscellaneous of Water Treatment System	SET	1	50,000.00	50,000.00	8421999090	
3	Electrical System						
3.1	Gas Engine Generator	SET	8	703,552.79	5,628,422.31	8503002000	
3.2	Gas Engine Generator Auxiliaries	SET	8	52,500.00	420,000.00		
3.3	Generator circuit breaker and accessories	SET	9	10,937.99	98,441.92	8536200000	
3.4	Vacuum circuit breaker	SET	9	48,169.23	433,523.09		
3.5	Phase busduct	M	300	7,085.61	2,125,684.46	8544601200	
3.6	Main transformer	SET	3	1,417,122.97	4,251,368.92	8504231200	
	Main transformer accessories	SET	1	965,251.66	965,251.66		
3.7	132Kv GIS Equipment	SET	1	810,631.39	810,631.39	8504231100 8535302000 8535292000 8535400000	
3.8	Protective panel	SET	1	335,081.17	335,081.17	8537209000	
3.9	Fast Transfer Devices	SET	1	124,751.67	124,751.67	8537209000	事故保安电源装置
3.10	Program control devices of CHP	SET	1	57,929.29	57,929.29	8537101190	
3.11	Direct current equipments and Battery	SET	1	59,349.12	59,349.12	8504401990	
3.12	High-Voltage Switchgear Cabinet	SET	1	82,182.94	82,182.94	8535900090	
3.13	Low-voltage distribution panel and accessories	SET	1	84,076.05	84,076.05	8537109090	
3.14	Engineer station	SET	1	57,128.46	57,128.46		
3.15	High voltage distribution device	SET	1	380,000.00	380,000.00		
3.16	Low-voltage transformers, dry-type transformer	SET	1	899,229.12	899,229.12	8504339000	
3.17	Diesel oil generator and accessories	SET	1	500,000.00	500,000.00	8502132000	
3.18	Uninterrupted Power Supply equipment:	SET	1	550,430.72	550,430.72	8504402000	
3.19	Lighting Facility	SET	1	56,570.98	56,570.98	9405500000	
3.20	Ground and Lighting Protector	SET	1	50,000.00	50,000.00	8537109090	
3.21	Lightning Arrester	SET	1	68,152.10	68,152.10	8535400000	
3.22	Communication system equipments	SET	1	208,242.53	208,242.53	8517699000	
3.23	Miscellaneous of electric system	SET	1	50,000.00	50,000.00	8538900000	
4	I&C system						
4.1	Distribution control system	SET	1	242,318.58	242,318.58	8471499100	
4.2	Instrumentation & actuator	SET	1	94,655.70	94,655.70	9026100000	
4.3	I&C for Gas Engine	SET	1	790,410.68	790,410.68	9026100000	
4.4	I&C measurement element equipments	SET	1	105,067.82	105,067.82	9026100000	
4.5	Protective and control panel	SET	1	39,755.39	39,755.39	8537109090	
4.6	Fire Detection and Alarm System	SET	1	40,100.00	40,100.00	8531901000	
4.7	I&C for BOP system	SET	1	416,485.07	416,485.07	8471499100	
4.8	Miscellaneous of I & C system	SET	1	50,000.00	50,000.00	9027809900	

S/N	Item Description	Unit	QTY.	Unit Price	Price	HS Code (Customs Declaration)	Remark
5	HVAC				-		
5.1	Fans for AC	SET	1	81,000.00	81,000.00	8414519900	
5.3	Constant temperature and humidity air conditioner:	SET	1	21,000.00	21,000.00	8415822001	
5.5	Split cabinet / Wall mountedair conditioners	SET	1	10,000.00	10,000.00	8415822001	
5.8	Air conditioning and accessories	SET	1	10,000.00	10,000.00	8415822001	
6	Compress Air System				-		
6.1	Air compressors and accessories	SET	1	675,410.68	675,410.68	8414400000	
6.2	Air storage tank	SET	1	66,000.00	66,000.00	7311001000	
7	Laboratory Equipment				-		
7.1	Chemistry instrument and Chemica	SET	1	76,793.42	76,793.42	9027809900	
7.2	Electrical laboratory equipment	SET	1	60,000.00	60,000.00	9030390000	
7.3	Instrument laboratory equipment	SET	1	60,000.00	60,000.00	9027809900	
7.4	Environmental laboratory equipment	SET	1	30,000.00	30,000.00		
7.5	Atmospheric quality continuous detection system	SET	1	30,000.00	30,000.00		
8	Material				-		
8.1	Valves	SET	1	980,000.00	980,000.00	8481804090	
8.1.1	First Partial			-	-		
8.1.2	Second Partial			-	-		
8.2	Medium and low pressure pipe	SET	1	380,000.00	380,000.00	7304391000	
8.2.1	First Partial			-	-		
8.2.2	Second Partial			-	-		
8.3	Electrical maintenance box	SET	1	160,000.00	160,000.00	8537109090	
8.3.1	Profile Steel	SET	1	50,000.00	50,000.00	7216	
8.3.2	First Partial			-	-		
8.3.3	Second Partial			-	-		
8.4	Lighting box	SET	1	200,000.00	200,000.00	94055000	
8.5	PVC&GRP pipe	SET	1	300,000.00	300,000.00	3917210000	
8.6	Stainless Steel Pipe	SET	1	24,000.00	24,000.00		
8.7	Wire pipe	SET	1	1,697.65	1,697.65	7304399000	
8.8	Whole plant cable(power& control)	SET	1	900,000.00	900,000.00	8544492100	
8.8.1	First Partial			-	-		
8.8.2	Second Partial			-	-		
8.8.3	Third Partial			-	-		
8.9	Cable tray	SET	1	500,000.00	500,000.00	7308900000	
8.9.1	First Partial			-	-		
8.9.2	Second Partial			-	-		
8.9.3	Third Partial			-	-		
8.10	Steel flate (grounding system)	SET	1	8,000.00	8,000.00	7214990000	
8.11	Grounding devices	SET	1	10,000.00	10,000.00	7214990000	
8.12	Trolley conductor	SET	1	8,000.00	8,000.00	8544492900	
8.13	Fireproofing material	SET	1	100,000.00	100,000.00	6806900000	
8.14	Thermal insulation material and painting	SET	1	50,000.00	50,000.00	6806900000 3208909000	
8.15	Instrumentation of I&C	SET	1	127,000.00	127,000.00	9026100000	
8.16	Steel structure	SET	1	824,598.35	824,598.35	7211140000	
8.16.1	First Partial			-	-		
8.16.2	Second Partial			-	-		
8.16.3	Third Partial			-	-		
8.16.4	Fourth Partial			-	-		
8.16.5	Fifth Partial			-	-		
8.17	Platform、railing	SET	1	80,000.00	80,000.00		
8.17.1	First Partial			-	-		
8.17.2	Second Partial			-	-		
8.18	Consumable material	SET	1	50,000.00	50,000.00	7216 7304 7308 8537	
8.19	Miscellaneous of materials	SET	1	50,000.00	50,000.00	7216 7304 7308 8537	
8.20	Container house	SET	1	90,869.47	90,869.47		
9	Other System				-		
9.1	Maintenance Equipmen	SET	1	94,655.70	94,655.70	8426112000	
9.2	Fire Fighting Equipment and Accessories	SET	1	988,458.24	988,458.24	8543709990	
9.3	Electric Cranes and Hoisters for Power Plant	SET	1	500,000.00	500,000.00	8426112000	
9.4	Steel Structure of Whole Power Plant	SET	1	400,000.00	400,000.00	7308900000	
9.5	High strength bolts of whole power plant steel structure	SET	1	50,000.00	50,000.00	7318151001	
9.6	Living water and industrial water equipment	SET	1	226,795.05	226,795.05		
					-		
10	Provisional Amount			500,000.00	500,000.00		
73,058,963.00							
Country of Origin: CHINA、NETHERLANDS、CZECH REPUBLIC、FRANCE、USA、GERMANY、ROMANIA、INDIA、ITALY、POLAND、FINLAND、AUSTRIA、SLOVAKIA、BELGIUM、KOREA、JAPAN、UK、SPAIN、THAILAND、FINLAND							

Gas Pipe Line, Main & Internal Gas skids and Related Accessories (Gas Infrastructure Works)

Item to be imported for Gas Infrastructure

Exhibit No.II (B)

Sr	Description	Unit	Qty	Amount - USD
	Imported Items			
1	10" ERW API 5L Grade x-42 MS 3 Layer PE Coated Line Pipe	MTR	7810	507,650
2	Freight charges, Tiajain to Ygn			30,000
3	Heat Shrinkable Sleeve	Rolls	25	8,275
4	10" ϕ Steel Ball Valve (ANSI 600 Class)	Set	3	18,360
5	Pipe Fitting (45° , 90°)	Lot	1	13,556
6	Gas Filtration Skid, Pressure Control & Metering Skid	Lot	1	807,000
7	Accessories of above gas skid	Lot	1	124,900
8	Internal gas skids, 8 sets of Pressure Reduction for Wartsila	Lot	1	368,680
	Total - Imported Items (USD)			1,878,421

မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်သို့

(ဂ) နောက်ဆက်တွဲ ခာရင်းယေးများ

(၂) ငွေကြေးဆိုင်ရာတွက်ချက်မှု ခာရင်းယေးများ

Exhibit No -III

PROPOSAL FORM (2)
Investment / Capital cost
145.49 MW Gas Power Plant Project

(Million USD)

Sr. No		Particulars	Equity	Loan	Total
1		2	3	4	5
1		INVESTMENT TYPE			
	1	Gas Engine		57.11	57.11
	2	Machinical and Electrical system	8.21	7.74	15.95
	3	Civil Work	10.95		10.95
	4	Gas Infrastruture	2.21		2.21
	5	EIA	0.04		0.04
	6	Others	6.42		6.42
Total Capital			27.83	64.85	92.68

PROPOSAL FORM (2)
 KYAUKSE POWER PLANT PROJECT
 MILLION USD
 Exhibit No-IV

Sr.no	Particular	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	2	3	4	5	6	7	8
1	Annual Net Energy Output (MWh)	1,019,596.72	1,019,596.72	1,019,596.72	1,019,596.72	1,019,596.72	5,097,983.62
	Revenue from electricity production	32.42	32.42	32.42	32.42	32.42	162.09
	Less Exchange Difference	(0.49)	(0.49)	(0.49)	(0.49)	(0.49)	(2.43)
2	Total Revenue	31.93	31.93	31.93	31.93	31.93	159.66
1	Net Guarantee Output (MW)	145.49					
2	Annual Operation Hours	8760					
3	Avg Plant Load Factor	80%					
4	PPA Tariff (USD/MWh)	31.79					

Note: EPGE shall make energy payment in the Myanmar Kyats equivalent to the tariff payable that is denominated in US Dollars base on Exchange rate published by Central Bank of Myanmar

PROPOSAL FORM (2)
KYAUKSE POWER PLANT PROJECT
BUTGETED PROFIT AND LOSS
Exhibit No. V
MILLION USD

Sr.No. 1	Particulars 2	Year 1 3	Year 2 4	Year 3 5	Year 4 6	Year 5 7	Total 8
1	Reveneue	32.42	32.42	32.42	32.42	32.42	162.09
	Less exchange difference	(0.49)	(0.49)	(0.49)	(0.49)	(0.49)	
	Gross Profit	31.93	31.93	31.93	31.93	31.93	159.66
2	Expenses						
1	Fixed O&M Cost	2.07	2.07	2.07	2.07	2.07	10.33
2	O&M Mobilisation cost	3.76	-	-	-	-	3.76
3	Variable O&M Cost	3.55	3.55	3.55	3.55	3.55	17.76
4	Major overhaul	-	-	-	5.55	-	5.55
5	Insurance	0.68	0.70	0.73	0.76	0.79	3.66
6	Withhold Tax	0.23	0.14	0.14	0.28	0.14	0.93
7	Penalties		0.53	0.08	0.53	0.16	1.29
	Total Expenses	10.28	6.99	6.56	12.73	6.71	43.28
3	EBITDA	21.65	24.94	25.37	19.20	25.22	116.38
	Depreciation & Amortization	18.54	18.54	18.54	18.54	18.54	92.68
4	EBIT	3.11	6.41	6.83	0.67	6.69	23.71
	Interest	5.19	4.15	3.11	2.08	1.04	15.56
5	Profit before tax	(2.08)	2.26	3.72	(1.41)	5.65	8.14
	Taxes	-	-	-	-	-	-
6	Profit after tax	(2.08)	2.26	3.72	(1.41)	5.65	8.14
	CSR	-	0.02	0.04	-	0.06	0.12
7	FINAL Net Earning	(2.08)	2.23	3.68	(1.41)	5.59	8.02

PROPOSAL FORM (2)
KYAUKSE POWER PLANT PROJECT
CASHFLOW STATEMENT
Exhibit No. VI
MILLION USD

Sr.no	Particular	Year (1)	Year 1	Year 2	Year 3	Year 4	Year 5
1	2	3	4	5	6	7	8
1	Operating Cash Flow						
	Net Earnings		(2.08)	2.23	3.68	(1.41)	5.59
	Plus: Depreciation & Amortization		18.54	18.54	18.54	18.54	18.54
	Less: Changes in Working Capital		-	-	-	-	-
	Cash from Operations		16.46	20.77	22.22	17.13	24.13
2	Investing Cash Flow						
	Investments in Property & Equipment	92.68	-	-	-	-	-
	Cash from Investing		-	-	-	-	-
3	Financing Cash Flow						
	Equity	27.83					
	Debt	64.85					
	Issuance (repayment) of debt		(12.97)	(12.97)	(12.97)	(12.97)	(12.97)
	Issuance (repayment) of equity		-	-	-	-	-
	Cash from Financing	92.68	(12.97)	(12.97)	(12.97)	(12.97)	(12.97)
4	Net Increase (decrease) in Cash		3.49	7.80	9.25	4.16	11.16
	Opening Cash Balance		-	3.49	11.29	20.54	24.69
5	Closing Cash Balance		3.49	11.29	20.54	24.69	35.85

PROPOSAL FORM (2)
KYAUKSE POWER PLANT PROJECT
RECOUPMENT PERIOD
Exhibit No-VII
MILLION USD

Sr.no	Particular	Year (1)	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	2	3	4	5	6	7	8	9
1	Cash Inflow							
	Profit (loss) after tax		-2.08	2.23	3.68	-1.41	5.59	8.02
	Add Depreciation		18.54	18.54	18.54	18.54	18.54	92.68
	Total Cash Inflow	-	16.46028	20.76829	22.21812	17.12567	24.12935	100.7017
2	Cash Outflow							
	Repayment of loan	0	12.97	12.97	12.97	12.97	12.97	64.84998
	Total Cash Outflow	-	12.97	12.97	12.97	12.97	12.97	64.85
3	Cash from Equity	27.83						
4	Net Cash Flow	(27.83)	3.49	7.80	9.25	4.16	11.16	35.85
	Opening Balance		(27.83)	(24.34)	(16.54)	(7.29)	(3.13)	
	Closing Balance	(27.83)	(24.34)	(16.54)	(7.29)	(3.13)	8.02	

Equity Payback period

4.28 Years

(Approximately 4 Years & 4 Month)

(Million USD)

YEAR	INVESTMENT	NET INCOME	DEPRECIATION	CASH FLOW	DCF		DCF	
					8%	DCF	9%	DCF
1	2	3	4	5	6	7	8	9
0	-							
-1	92.68			(92.68)	1.000	(92.68)	1.0000	(92.68)
1		3.11	18.54	21.65	0.926	20.04	0.9174	19.86
2		6.38	18.54	24.92	0.857	21.36	0.8417	20.97
3		6.80	18.54	25.33	0.794	20.11	0.7722	19.56
4		0.67	18.54	19.20	0.735	14.11	0.7084	13.60
5		6.63	18.54	25.17	0.681	17.13	0.6499	16.36
Total		23.59		23.59		0.08		(2.32)
<div> <div>Project IRR</div> <div>8.03%</div> </div>								

PROPOSAL FORM (2)
KYAUKSE POWER PLANT PROJECT
INTERNAL RATE OF RETURN
Exhibit No. VIII (B)

(Million USD)

YEAR	EQUITY	NET INCOME	CASH FLOW	DCF		DCF	
				8%	DCF	9%	DCF
1	2	3	5	6	7	8	9
0	-						
-1	27.83		(27.83)	1.000	(28)	1.0000	(28)
1		3.49	3.49	0.926	3	0.9174	3
2		7.80	7.80	0.857	7	0.8417	7
3		9.25	9.25	0.794	7	0.7722	7
4		4.16	4.16	0.735	3	0.7084	3
5		11.16	11.16	0.681	8	0.6499	7
Total		35.85	8.02		0.08		(0.72)
Equity IRR		8.10%					

PROPOSAL FORM (2)
KYAUKSE POWER PLANT PROJECT
REPAYMENT OF LOCAL LOAN
Exhibit No. IX

Foreign Commercial Bank

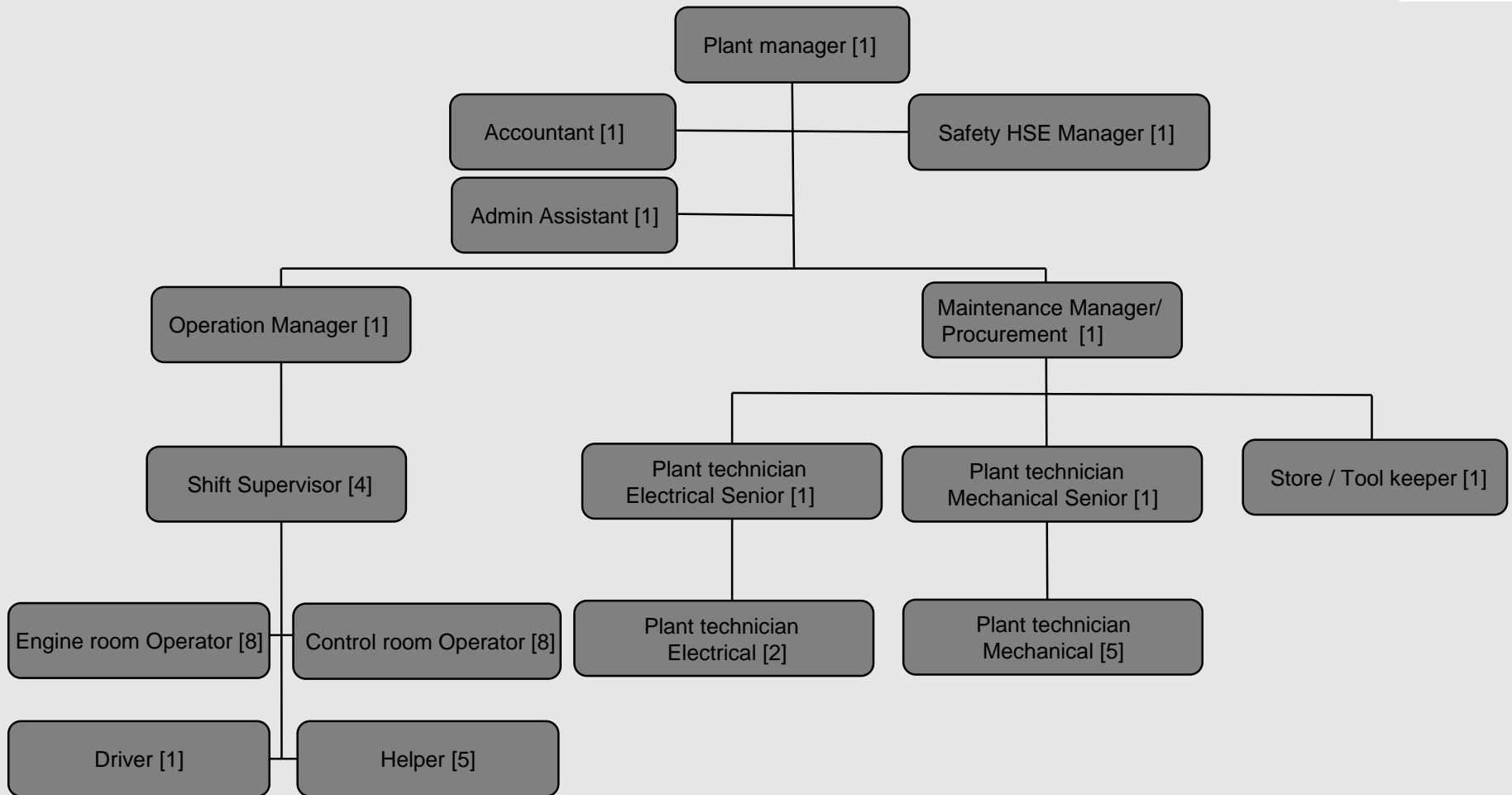
All in Loan Interest Rate	8%
Loan Duration, Years	5

MILLION USD

Sr. No.	Description	Year (1)	Year 1	Year 2	Year 3	Year 4	Year 5	Total
1	2	3	6	7	8	9	10	16
1	Opening Balance of loan	64.85	64.85	51.88	38.91	25.94	12.97	
2	Interest Payment	2.59	5.19	4.15	3.11	2.08	1.04	18.16
3	Principal Repayment	-	12.97	12.97	12.97	12.97	12.97	64.85
4	Closing Balance of loan	64.85	51.88	38.91	25.94	12.97	-	

ဝန်ထမ်းအင်အားစာရင်း

Preliminary Organisation Chart



Total 42 employees

LIST OF OPERATION STAFF AND SALARY
145.49 MW GAS POWER PLANT PROJECT
Exhibit No. X

Sr.	Particular	Local		Foreigner		Total Qty	Total Monthly Salary, USD	Total Annual Salary, USD
		Qty	Salary USD /Month	Qty	Salary USD /Month			
1	Plant Manager			1	10,000	1	10,000	120,000
2	Admin assistant	1	3,000			1	3,000	36,000
3	HSE Manager			1	5,000	1	5,000	60,000
4	Accountant	1	1,500			1	1,500	18,000
5	Operation Manager			1	5,000	1	5,000	60,000
6	Shift Supervisor	4	2,000			4	8,000	96,000
7	Operator	16	1,300			16	20,800	249,600
8	Driver	1	1,000			1	1,000	12,000
9	Maintenance Manager			1	5,000	1	5,000	60,000
10	Mechanical/Electrical Engineer	7	1,300	2	2,000	9	13,100	157,200
11	Store/Tool Keeper	1	1,200			1	1,200	14,400
12	Helper	5	1,000			5	5,000	60,000
	Total	36		6		42		943,200

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး အစီအစဉ်

POWERGEN KYAUKSE COMPANY LIMITED

NO.(36), THEIN PHYU ROAD, PAZUNDAUNG TOWNSHIP, YANGON, MYANMAR.
TEL: (95-1) 8610654, 8610656~59. FAX: (95-1) 200273, 295067

“ To Whom It May Concern ”

We, PowerGen Kyaukse Co., Ltd. , has been starting to implement “ 145 MW Gas Engine Power Plant (145 MW GEPP)” in Belin village, Sintgaing Township, Kyaukse District, Myanmar in order to fulfill national power demand and supply of electricity in industrial development after receiving Letter of Award (LOA) from the Ministry of Electricity and Energy on 7.5.2018.

It is, therefore, we have appointed the following company to carry out Environmental and Social Impact Assessment (EIA) for our development project, 145 MW GEPP (Kyaukse).

Myanmar Sustainable Development Engineering Services Company Ltd.

No.651, Airport Avenue Lane 1, Saw Bwar Gyi Kone, Insein Tsp, Yangon, Myanmar.


Sales: +95(9)69-5410678, +95(9)7-3175448,

Admin: +95(9)78-1277395, +95(9)69-5160905

Project Team: +95(9)96-5160905

Email : nanda@m-sdes.com/contact@m-sdes.com

Best Regards


Yee Yee Htwe
Director
Myanmar Chemical & Machinery Co., Ltd.
(On behalf of PowerGen Kyaukse Co., Ltd.)



Myanmar Sustainable Development Engineering Services Co., Ltd.

No.651, Airport Avenue (1), Saw Bwar Gyi Kone, Insein Township, Yangon, Myanmar
Admin: +95(9) 78-1277395, +95(9) 69-5160905, Project Team: +95(9) 96-5160905
Sale: +95(9) 69-5410678, +95(9) 7-3175448
Fax: +95(0)1-655-849
Email: contact@m-sdes.com, Website: www.m-sdes.com



စာအမှတ်။ MSDES_၂၆/၀၇၀၁၁၈_Mdy RGO
ရက်စွဲ။ ၂၀၁၈ ခုနှစ်၊ ဩဂုတ်လ၊ (၈) ရက်

ပန်ကြီးချုပ်
တိုင်းဒေသကြီးအစိုးရအဖွဲ့
မန္တလေးမြို့။

အကြောင်းအရာ။ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်လေ့လာခြင်းနှင့်ပတ်သက်၍ ဒေသခံရပ်မိရပ်ဖေနှင့် စိတ်ပါဝင်စားသူများ၏ သဘောထားဆန္ဒ အကြံပြုချက်များရယူနိုင်ပါရန်အတွက် "ပထမအကြိမ် အဓိကသက်ဆိုင်သူများ အစည်းအဝေး" ကိုပြုလုပ်ခွင့်ပေးပါရန် တင်ပြလျှောက်ထားခြင်းနှင့်၊ အစည်းအဝေးသို့ သက်ဆိုင်ရာ ဒေသန္တရအုပ်ချုပ်ရေး အဖွဲ့အစည်းများမှ တက်ရောက်ပေးနိုင်ရန်အတွက် ဖိတ်ကြားခြင်း။

၁။ အထက်ပါအကြောင်းအရာကိုစွန့်ပတ်သက်၍ ကျွန်တော်တို့ မြန်မာစဉ်ဆက်မပြတ်ဖွံ့ဖြိုးမှု အင်ဂျင်နီယာ ဝန်ဆောင်မှု ကုမ္ပဏီသည် တဲလင်းဓာတ်အားဓွေရှင်းအတွင်း PowerGen Kyaukse Co.,Ltd မှ အကောင်အထည်ဖော်ဆောင်ရွက်မည့် ၁၄၅ မဂါဝပ် သဘာဝဓာတ်ငွေ့အင်ဂျင်သုံးလျှပ်စစ်ဓာတ်အားပေးစက်ရုံစီမံကိန်းနှင့် ပတ်သက်၍ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ် လေ့လာမှုများကို ပူးတွဲပါ (၁) တွင် ဖော်ပြထားသည့်အတိုင်း တာဝန်ယူဆောင်ရွက်လျက်ရှိပါသည်။

၂။ အဆိုပါ သဘာဝဓာတ်ငွေ့အင်ဂျင်သုံးလျှပ်စစ်ဓာတ်အားပေးစက်ရုံစီမံကိန်းနှင့်ပတ်သက်၍ ဒေသခံရပ်မိရပ်ဖေများ၊ အဓိကသက်ဆိုင် သူများ၊ ကိုယ်စားလှယ်များအား ပွင့်လင်းမြင်သာမှုရှိစေရန်အတွက် စီမံကိန်းသတင်းအချက်အလက်များအား ရှင်းလင်းတင်ပြခြင်း၊ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်လေ့လာခြင်း လုပ်ငန်းစဉ်များအား ရှင်းလင်းတင်ပြခြင်းနှင့်၊ ဖြစ်နိုင်ခြေရှိသော ပတ်ဝန်းကျင်ထိခိုက်မှုများအား ရှင်းလင်းတင်ပြမည်ဖြစ်ပါသည်။ ထို့အပြင် စီမံကိန်းနှင့်ပတ်သက်၍ ဒေသခံရပ်မိရပ်ဖေများ၊ အဓိကသက်ဆိုင်သူများ၊ ကိုယ်စားလှယ်များနှင့်ဆွေးနွေး၊ မေးမြန်း၊ အကြံပြုချက်၊ သဘောထားများရယူလိုပါသဖြင့် "ပထမအကြိမ်အဓိက သက်ဆိုင်သူများအစည်းအဝေး" ကို အောက်ဖော်ပြပါ အစီအစဉ်အတိုင်းပြုလုပ်ခွင့် ပေးပါရန်နှင့် အစည်းအဝေးသို့ ဒေသန္တရအုပ်ချုပ်ရေးအဖွဲ့အစည်းများမှ အောက်ဖော်ပြပါ အစီအစဉ်အတိုင်း တက်ရောက်ပေးနိုင်ရန်အတွက် လေးစားစွာဖိတ်ကြားအပ်ပါသည်။

၃။ အစည်းအဝေးအစီအစဉ်-

အကြောင်းအရာ။	ပထမအကြိမ်အဓိကသက်ဆိုင်သူ/ကိုယ်စားလှယ်များ၏သဘောထားဆန္ဒ၊ အကြံပြုချက်များရယူနိုင်ရန်အတွက် အစည်းအဝေးအခမ်းအနားကျင်းပခြင်း။
နေ့စွဲ	၂၀၁၈ ခုနှစ်၊ ဩဂုတ်လ၊ ၁၇ ရက်၊ သောကြာနေ့။
အချိန်	နေ့စဉ် ၁ နာရီမှ၊ ညနေ ၄ နာရီအထိ။
နေရာ	ရွာလယ်ဘုရားဓမ္မာရုံ၊ ဘယ်လင်းကျေးရွာ၊ ဘယ်လင်းအုပ်စု။

၄။ စီမံကိန်းကြောင့် ထိခိုက်နိုင်မည့်သူများ တွေ့ဆုံဆွေးနွေးပွဲ (Project Affected People Meeting) ကိုလည်း နတ်ပင်ကျေးရွာတွင် သင့်တော်သောနေ့ရက်၊ နေရာ၌ ဆောင်ရွက်ခွင့်ပြုပေးပါရန် တင်ပြအပ်ပါသည်။

လေးစားစွာဖြင့်

အောင်နန္ဒ (Managing Director)

ပူးတွဲ- (၁) EIA လုပ်ငန်းခန့်အပ်လွှာ

- မိတ္တူကူး- (၁) ခရိုင်အုပ်ချုပ်ရေးမှူး၊ ခရိုင်အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာန၊ ကျောက်ဆည်မြို့၊ မန္တလေးတိုင်းဒေသကြီး။
(၂) မြို့နယ်အုပ်ချုပ်ရေးမှူး၊ မြို့နယ်အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာန၊ စဉ့်ကိုင်မြို့နယ်၊ မန္တလေးတိုင်းဒေသကြီး။
(၃) မြို့နယ်အုပ်ချုပ်ရေးမှူး၊ မြို့နယ်အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာန၊ ကျောက်ဆည်မြို့နယ်၊ မန္တလေးတိုင်းဒေသကြီး။
(၄) PowerGen Kyaukse Co., Ltd.
(၅) ရုံးလက်ခံ

Myanmar Sustainable Development Engineering Services Co., Ltd.

No.651, Airport Avenue (1), Saw Bwar Gyi Kone, Insein Township, Yangon, Myanmar

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စာအမှတ်။ MSDES_၂၇/၈၇၀၈၁၈_Mdy RGO

ရက်စွဲ။ ၂၀၁၈ ခုနှစ်၊ ဩဂုတ်လ (၈) ရက်

ဝန်ကြီးချုပ်

တိုင်းဒေသကြီးအစိုးရအဖွဲ့

မန္တလေးမြို့။

အကြောင်းအရာ။

။ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်လေ့လာခြင်းနှင့် ပတ်သက်၍ သဘာဝပတ်ဝန်းကျင်လူမှုစီးပွား
ဆိုင်ရာ အချက်အလက်များအား ကွင်းဆင်းလေ့လာ၊ ကောက်ယူတိုင်းတာခွင့်ပြုပါရန်
လျှောက်ထားခြင်း။

၁။အထက်ပါ အကြောင်းအရာပါကိစ္စနှင့်ပတ်သက်၍ ကျွန်တော်တို့ မြန်မာစဉ်ဆက်မပြတ်ဖွံ့ဖြိုးမှုအင်ဂျင်နီယာ ဝန်ဆောင်မှု
ကုမ္ပဏီသည် ဘဲလင်းဓာတ်အားစွဲရုံဝင်းအတွင်း PowerGen Kyaukse Co., Ltd. မှ အကောင်အထည်ဖော်ဆောင်ရွက်မည့် ၁၄၅
မဂ္ဂါဝပ်ရှိ သဘာဝဓာတ်ငွေ့အင်ဂျင်သုံး လျှပ်စစ်ဓာတ်အားပေး စက်ရုံစီမံကိန်းနှင့်ပတ်သက်၍ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်
လေ့လာမှု အစီရင်ခံစာ ရေးသားပြုစုနိုင်ရန်အတွက် ဘာသာရပ်ဆိုင်ရာ ကျွမ်းကျင်ပညာရှင်များဖြင့် စီမံကိန်းဧရိယာ
အနီးတစ်ဝိုက်ဖြစ်သော စဉ့်ကိုင်မြို့နယ်နှင့် ကျောက်ဆည်မြို့နယ်အတွင်း သဘာဝပတ်ဝန်းကျင်လူမှုစီးပွားဆိုင်ရာ အချက်အလက်
များအား ၂၀၁၈ ခုနှစ်၊ ဩဂုတ်လ ၄ စတင်၍ ၆ လခန့် အကြာ သဘာဝပတ်ဝန်းကျင်လူမှုစီးပွားဆိုင်ရာ အချက်အလက်များအား
ကွင်းဆင်းလေ့လာကောက်ယူတိုင်းတာရန် လိုအပ်ပါသဖြင့် ကွင်းဆင်းလေ့လာကောက်ယူတိုင်းတာခွင့်ပြုပါရန် တင်ပြအပ်ပါ
သည်။

လေးစားစွာဖြင့်

ဆောင်နန္ဒ (Managing Director)

မိတ္တူကူး- (၁) ခရိုင်အုပ်ချုပ်ရေးမှူး၊ ခရိုင်အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာန၊ ကျောက်ဆည်မြို့၊ မန္တလေးတိုင်းဒေသကြီး။

(၂) မြို့နယ်အုပ်ချုပ်ရေးမှူး၊ မြို့နယ်အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာန၊ စဉ့်ကိုင်မြို့နယ်၊ မန္တလေးတိုင်းဒေသကြီး။

(၃) မြို့နယ်အုပ်ချုပ်ရေးမှူး၊ မြို့နယ်အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာန၊ ကျောက်ဆည်မြို့နယ်၊ မန္တလေးတိုင်းဒေသကြီး။

(၄) PowerGen Kyaukse Co., Ltd.

(၅) ရုံးလက်ခံ



၁၄၅ မဂ္ဂါဝပ် သဘာဝဓာတ်ငွေ့အင်ဂျင်သုံး လျှပ်စစ်ဓာတ်ဓါတ်အားပေးစက်ရုံ စီမံကိန်း
(ဘယ်လင်း ကျေးရွာ၊ စဉ့်ကိုင်မြို့နယ် ၊ ကျောက်ဆည် ခရိုင် ၊ မန္တလေးတိုင်းဒေသကြီး



**Myanmar Sustainable Development
Engineering Services Co., Ltd.**



National Infrastructure Holdings Consortium
10th August 2018

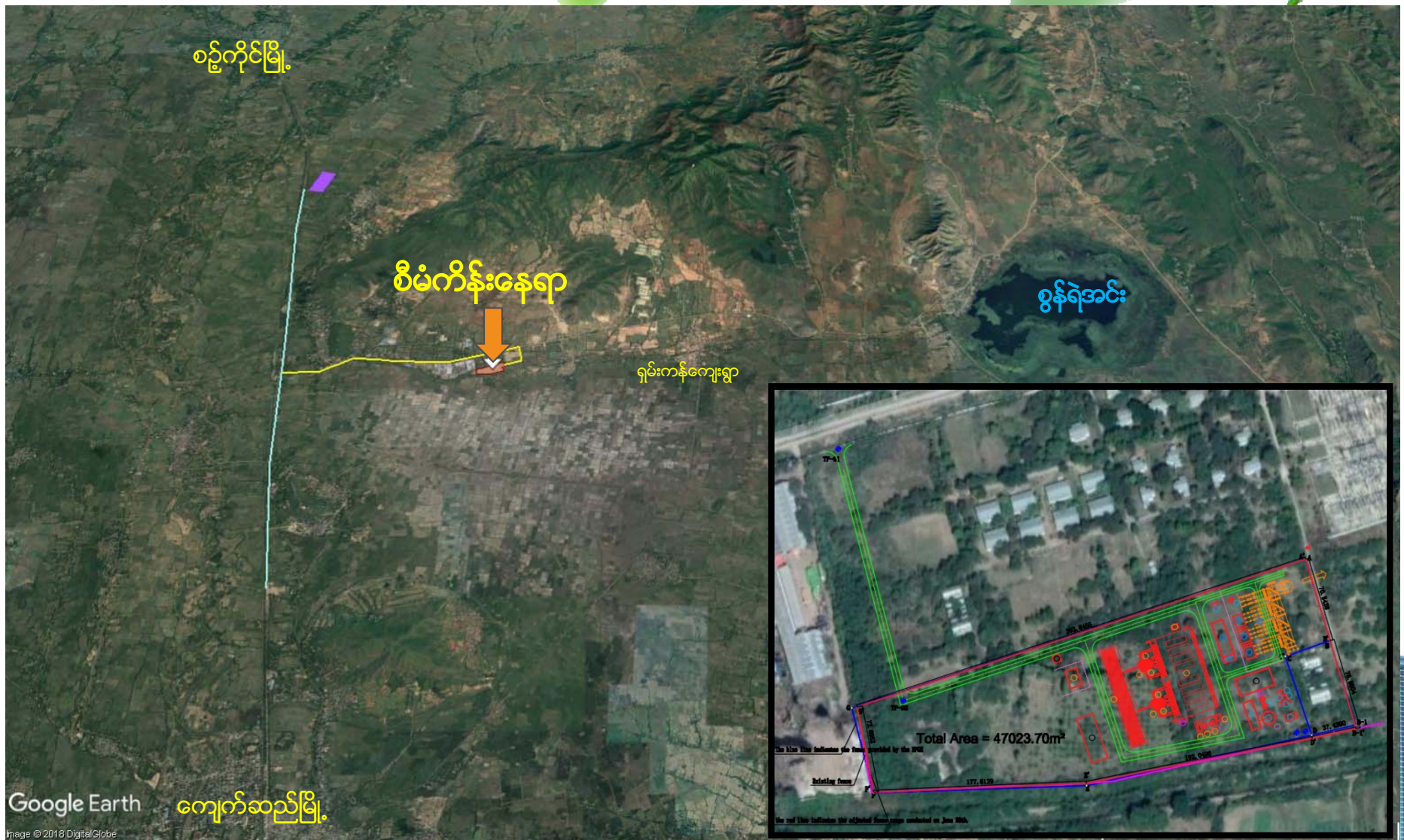
Go together for long run...



၁၄၅ မဂ္ဂါဝပ် သဘာဝဓါတ်ငွေ့အင်ဂျင်သုံး ဓါတ်အားပေးစက်ရုံစီမံကိန်း သတင်းအချက်အလက်အကျဉ်း

စဉ်	အကြောင်းအရာ	
၁	စီမံကိန်းတည်နေရာ	ဘယ်လင်းပင်မဓါတ်အားခွဲရုံပိုင်မြေနေရာ၊ ဘယ်လင်းကျေးရွာ၊ ကျောက်ဆည်ခရိုင်၊ မန္တလေးတိုင်းဒေသကြီး
၂	လျှပ်စစ်ဓါတ်အားထုတ်လုပ်မည့်နည်းပညာ	သဘာဝဓါတ်ငွေ့အင်ဂျင်
၃	အင်ဂျင်အမျိုးအစား	Wärtsilä W 18V50SG (ဖင်လန်နိုင်ငံ)
၄	ထုတ်လုပ်နိုင်သည့် လျှပ်စစ်ဓါတ်အား	၁၄၅ မဂ္ဂါဝပ် (၁၈ မဂ္ဂါဝပ် x ၈လုံး) 18V50SG
	စီမံကိန်းအကောင်အထည်ဖော်သူ	National Infrastructure Holdings Co., Ltd., Myanmar Chemical and Machinery Co., Ltd. and SEPCO3
၅	စီမံကိန်း ရင်းနှီးမြှုပ်နှံမှု၊ ငွေကြေးပမာဏ	အမေရိကန်ဒေါ်လာ သန်း ၁၀၀ မှ ၁၂၀ ကြား
၆	စီမံကိန်း ဧရိယာ	47023.70 m ²
၇	စီမံကိန်းကာလ	၅ နှစ်
၈	တည်ဆောက်ရေးကာလ	၁၀ လ (ခန့်မှန်း)
	စတင်လည်ပတ်မည့်အချိန်	၂၀၁၉ ခုနှစ် ဖေဖော်ဝါရီလ
၉	သဘာဝဓါတ်ငွေ့အသုံးပြုမှု	တစ်ရက်လျှင်ကုဗပေ သန်း ၃၀
၁၀	ရေဆိုးမွန်းမံပြုပြင်မှုစနစ်	ပါရှိပါသည်။
၁၁	အသံဆူညံမှုထိန်းနံရံ	ပါရှိပါသည်။

၁၄၅ မဂ္ဂါဝပ် သဘာဝဓါတ်ငွေ့အင်ဂျင်သုံး ဓါတ်အားပေးစက်ရုံစီမံကိန်း
စက်ရုံတည်ဆောက်ရေးစီမံလျာထားချက်



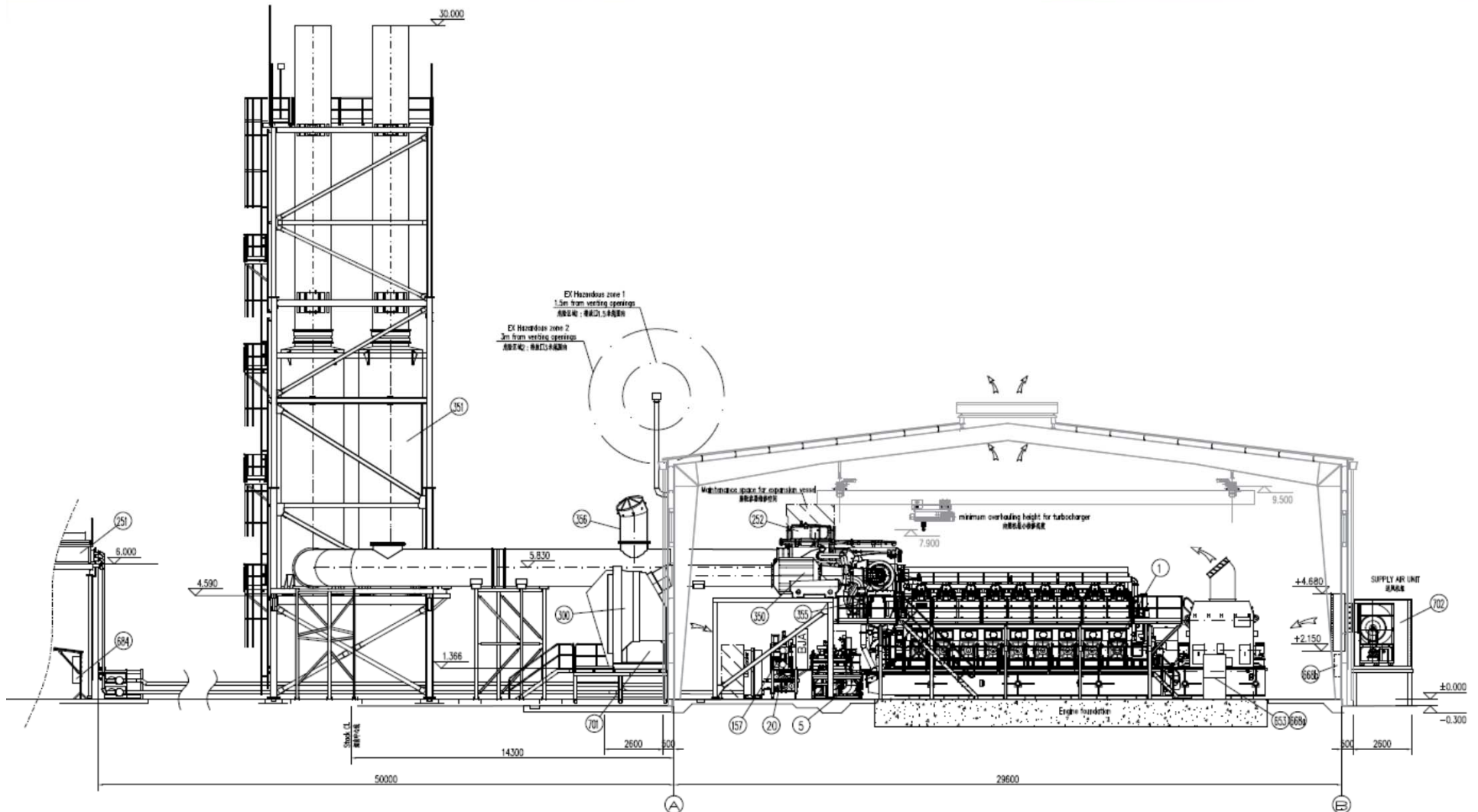
12 August 2018

၁၄၅ မဂ္ဂါဝပ် သဘာဝဓါတ်ငွေ့အင်ဂျင်သုံး ဓါတ်အားပေးစက်ရုံစီမံကိန်း
စက်ရုံတည်ဆောက်ရေးစီမံလျာထားချက်

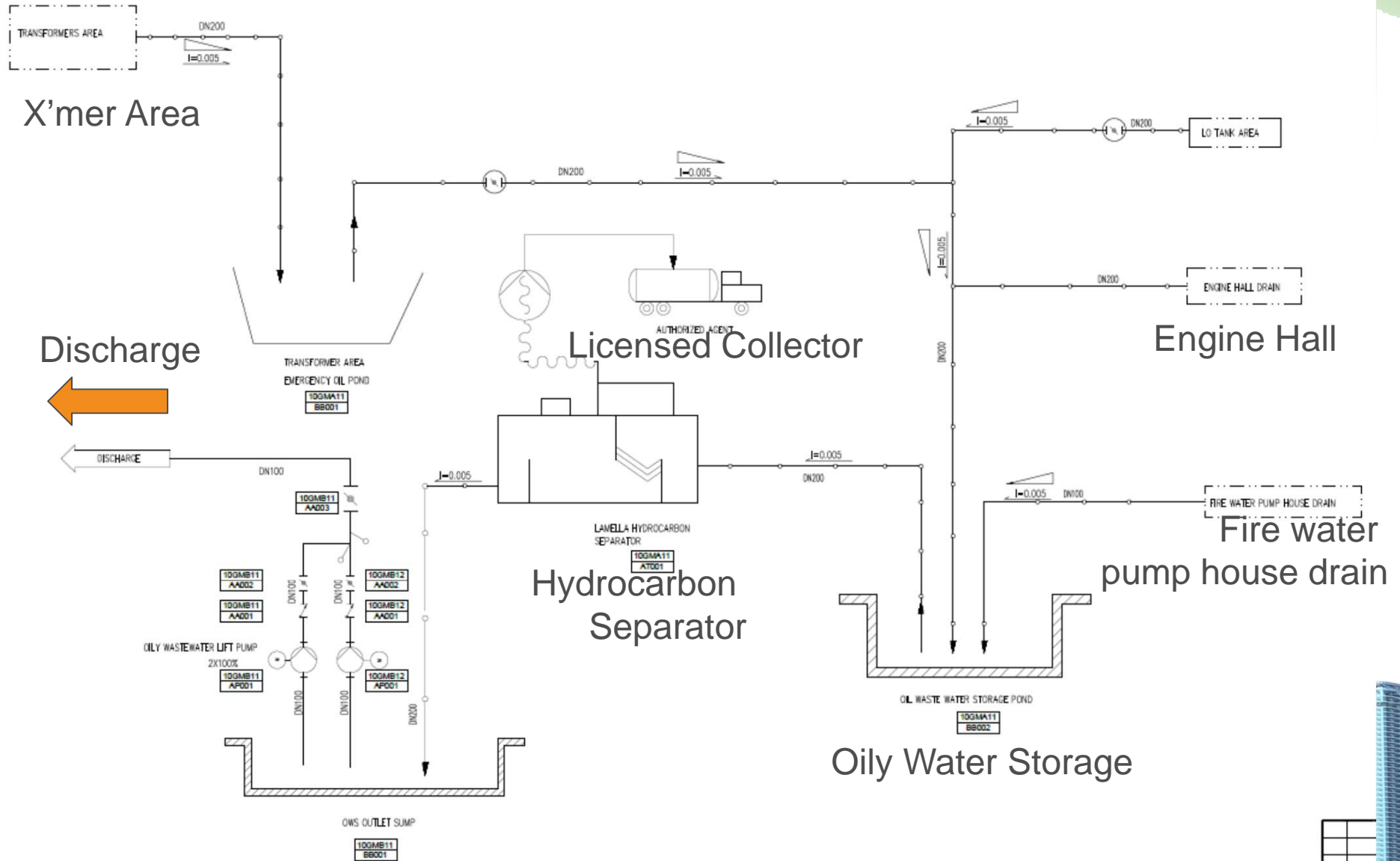


စီမံကိန်းအကျယ်အဝန်း = ၄၇၀၂၃.၇၀ စတုရန်းမီတာ

၁၄၅ မဂ္ဂါဝပ် သဘာဝဓါတ်ငွေ့အင်ဂျင်သုံး ဓါတ်အားပေးစက်ရုံစီမံကိန်း
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စီမံကိန်း တည်နေရာ၊ မြေပြင်အနေအထားနှင့် ဆောင်ရွက်ထားရှိမှု

145 MW GEPP Kyaukse Site Visit – 06Jul2018



Update Construction Site Condition



Soil Test

Access Road from Main Road for
Heavy Cargo Route

Broken Concrete Fence Post by
SEPCO3

၁၄၅ မဂ္ဂါဝပ် သဘာဝဓါတ်ငွေ့အင်ဂျင်သုံး ဓါတ်အားပေးစက်ရုံစီမံကိန်း
စီမံကိန်း တည်နေရာ မြေပြင်အနေအထား



Slab for Planned Dormitory
& Site Office of SEPCO3



With Sunbstation Manager
U Ye` Nyunt



Fence Post & Chain Link
Demolished by SEPCO3



Fence between Plywood Factory
& Our Project Area



Sewage Outlet of SEPCO3
and Sump Pit



Temporary Drainage along
the Access Road

၁၄၅ မဂ္ဂါဝပ် သဘာဝဓါတ်ငွေ့အင်ဂျင်သုံး ဓါတ်အားပေးစက်ရုံစီမံကိန်း
စီမံကိန်း တည်နေရာ၊ မြေပြင်အနေအထားနှင့် ဆောင်ရွက်ထားရှိမှု



Sewage Outlet of SEPCO3



SEPCO3 Container Offices & Temporary Gen-set



SEPCO3 Container Offices & Temporary Gen-set



၁၄၅ မဂ္ဂါဝပ် သဘာဝဓါတ်ငွေ့အင်ဂျင်သုံး ဓါတ်အားပေးစက်ရုံစီမံကိန်း
စီမံကိန်း တည်နေရာ မြေပြင်အနေအထား



Two Houses to be renovated



Project Schedule and ESIA Report preparation Timeline

Myanmar 145 MW Gas Power Station Project Schedule									
Project Activities	2018							2019	
	June	July	August	Sept	Oct	Nov	Dec	Jan	Feb
General									
Gas Engine and Auxillary System									
Generator and Auxillary System									
Demineralized Water system									
Dosing System									
Electrical leadout and Main Transformer									
AIS system									
Main Control and DC system									
Gas Infrastrucutre schedule									
Auxillary power system									
Electrical cable and accesssries									
Waste water treatment system									
Firefighting system									
HVAC system									
Intake water system									
Unit Commissioning									

MSDES Activities	2018				
	August	September	October	November	December
Intial Field Survey					
Environment/Health and Social Survey					
Public Hearing (Initial Stage)					
Scoping Report Submission to ECD					
Impact Assessment and mitigation					
EMP and GRM preparation					
ESIA report Preparation					
Public Hearing (EIA stage)					
ESIA Report Submission to ECD					

၁၄၅ မဂ္ဂါဝပ် သဘာဝဓါတ်ငွေ့ အင်ဂျင်သုံး ဓါတ်အားပေးစက်ရုံစီမံကိန်း သတင်းအချက်အလက်အကျဉ်း



POWERGEN KYAUKSE COMPANY LIMITED

NO.(36), THEIN PHYU ROAD, PAZUNDAUNG TOWNSHIP, YANGON, MYANMAR.
TEL: (95-1) 8610654, 8610656~59. FAX: (95-1) 200273, 295067

“ To Whom It May Concern ”

We, PowerGen Kyaukse Co., Ltd. , has been starting to implement “ 145 MW Gas Engine Power Plant (145 MW GEPP)” in Belin village, Sintgaing Township, Kyaukse District, Myanmar in order to fulfill national power demand and supply of electricity in industrial development after receiving Letter of Award (LOA) from the Ministry of Electricity and Energy on 7.5.2018.

It is, therefore, we have appointed the following company to carry out Environmental and Social Impact Assessment (EIA) for our development project, 145 MW GEPP (Kyaukse).

Myanmar Sustainable Development Engineering Services Company Ltd.

No.651, Airport Avenue Lane 1, Saw Bwar Gyi Kone, Insein Tsp, Yangon, Myanmar.

Sales: +95(9)69-5410678, +95(9)7-3175448,

Admin: +95(9)78-1277395, +95(9)69-5160905

Project Team: +95(9)96-5160905

Email : nanda@m-sdes.com/contact@m-sdes.com

Best Regards

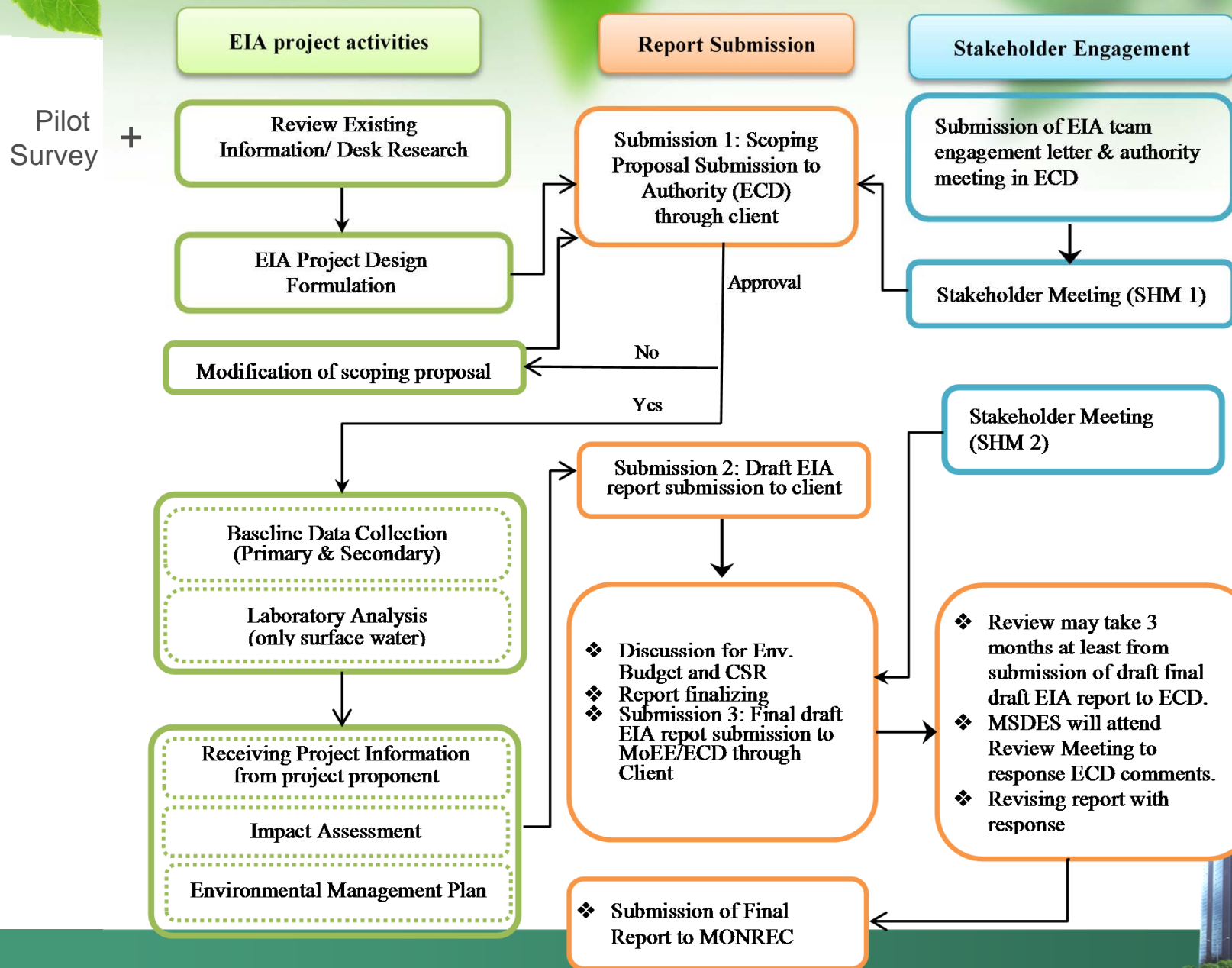
Y
318718

Yee Yee Htwe
Director

Myanmar Chemical & Machinery Co., Ltd.
(On behalf of PowerGen Kyaukse Co., Ltd.)



လူမှုစီးပွား နှင့် သဘာဝပတ်ဝန်းကျင် အကျိုးသက်ရောက်မှု ဆန်းစစ်လေ့လာခြင်းဆိုင်ရာ ချဉ်းကပ်နည်းလမ်း



၁၄၅ မဏ္ဍိုင် သဘာဝဓါတ်ငွေ့အင်ဂျင်သုံး ဓါတ်အားပေးစက်ရုံစီမံကိန်း
EIA ဘာသာရပ်ဆိုင်ရာကျွမ်းကျင်ပညာရှင်များပါဝင်မှု

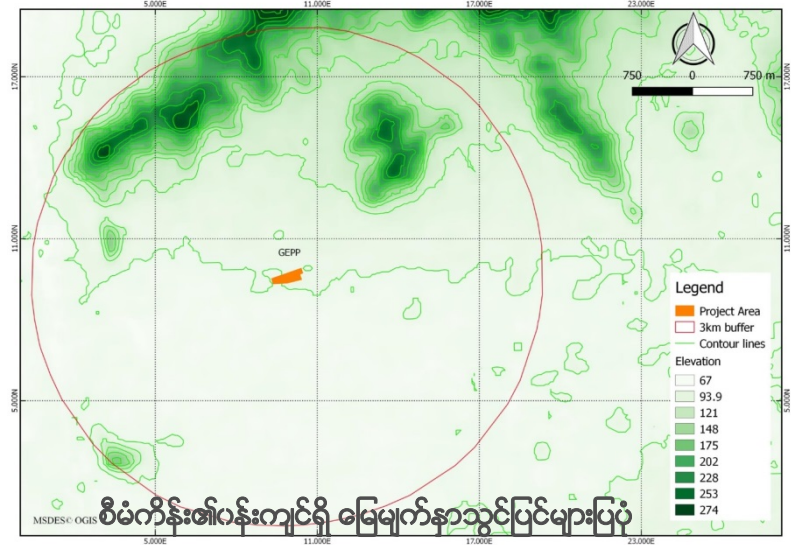
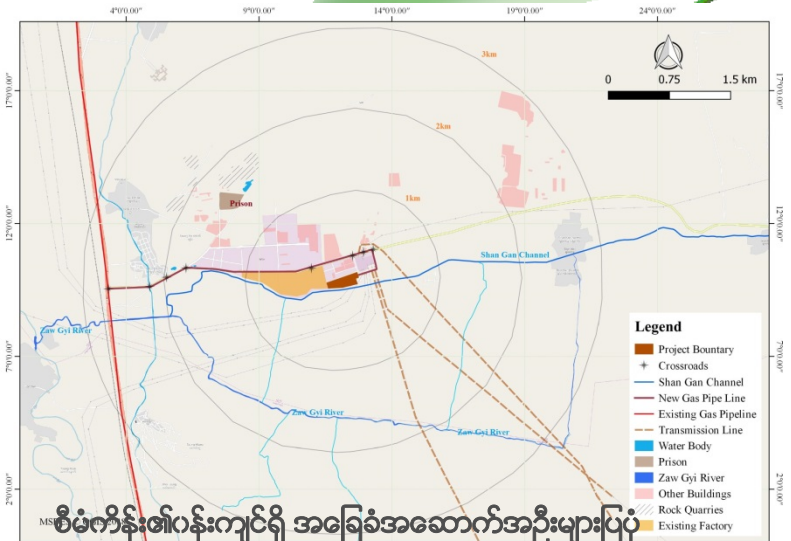
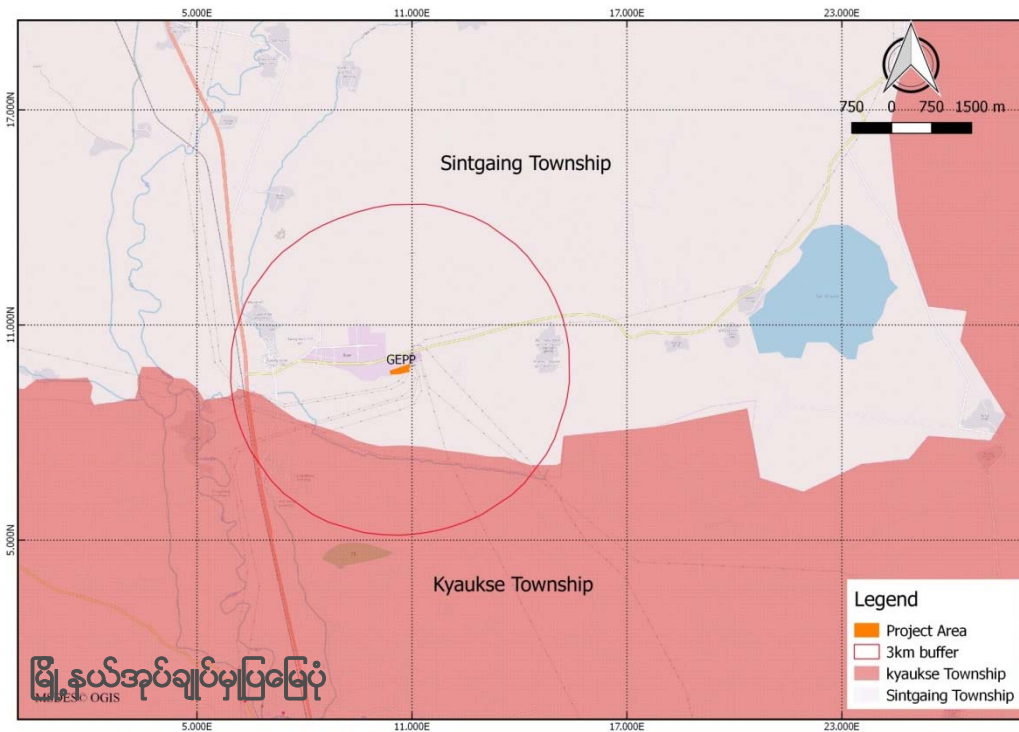
EIA study component	Key Practitioner	TRC No.
Water Environment / EIA Project Design & Management	U Aung Nanda	10112
Environmental Science and Engineering Management Plan/System (EMP/EMS)	U Aung Nanda	10112
Noise Assessment	U Aung Nanda	10112
Legal Framework/ Law & Policy requirement	Chit Su San	10117
Air Quality Assessment	MSDES/REM	TBA
Biodiversity (Flora)	Prof. Dr. Myint Aung	10115
Biodiversity (Fauna)	Dr. Sai Sein Lin Oo	TBA
Socio-economic Impact Assessment (SIA)	Prof. Dr. Than Aung Htwe	10116
Social Management Plan	Prof. Dr. Than Aung Htwe	10116
Cultural Heritage Assessment (If required)	Dr. Pyiet Phyo Kyaw	10114
Health Impact Assessment	Dr. Kyaw Maung Maung Hein	10118
GIS/RS	Htet Akar Soe	10113
Engineering Analysis	Win Myint and Aung Nanda	TBA
Safe Working Practice	MSDES Team	
Waste Management	Aung Nanda	
Social Surveyor team	MSDES Team	

ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်လေ့လာခြင်းဆိုင်ရာ နယ်ပယ်သတ်မှတ်ခြင်း

- ဝန်းကျင် လူမှုစီးပွား လေ့လာဆန်းစစ်မှု နယ်နိမိတ် ။ ။ စီမံကိန်းဧရိယာနှင့်ဆက်စပ် ၃ ကီလိုမီတာ အဝန်းအဝိုင်းအတွင်းရှိ သဘာဝ ဝန်းကျင် နှင့် လူမှုစီးပွားထိခိုက်နိုင်ခြေများကို လေ့လာဆန်းစစ်သွားပါမည်။



Existing Environmental & Social Setting



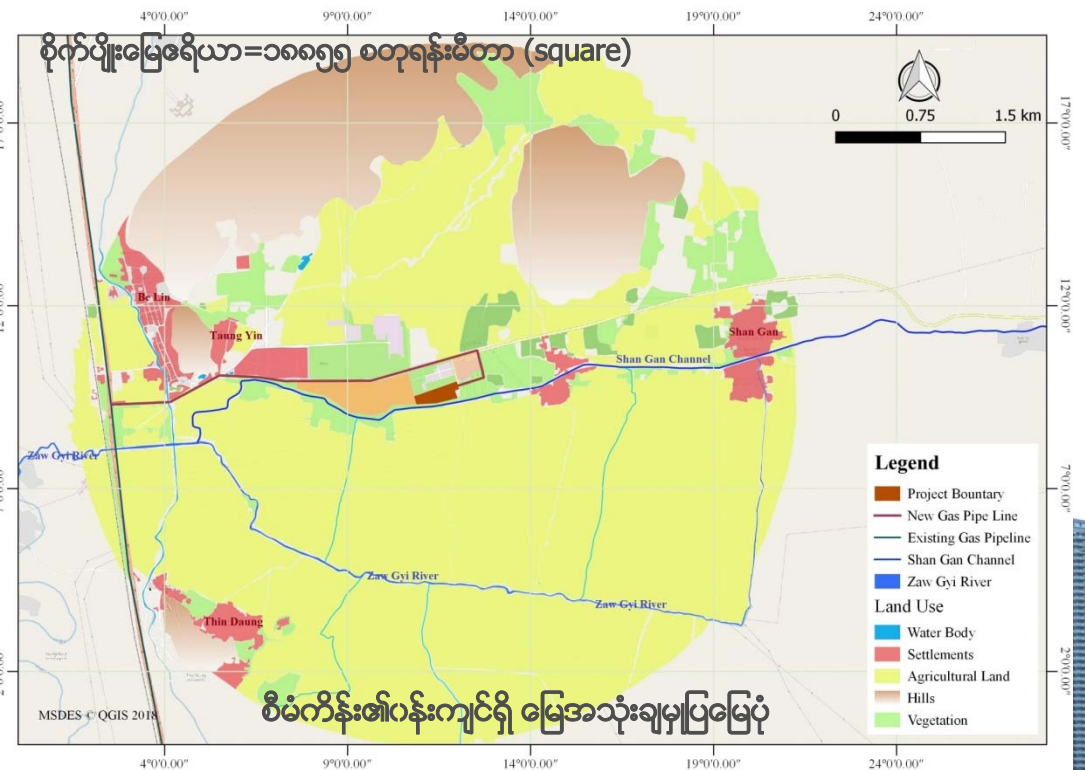
- Area of interest, 3 km radius from project area, situated within the administrative boundary of Sint Gaing and Kyauk Se Township .



Existing Environmental & Social Setting

Direction	Name of Possible receptor	Distance from GEPP	Remark
North	Belin Substation	0.36km	
	Kein Na Ya Taung	2km	
	Agricultural Land		
Southeast	Agricultural Land		
East	Unknown Village (V1)	1km	
	Shan Gan Village	2.8km	
	Agricultural Land		
South	Agricultural Land		
	Shan Gan Irrigation channel	Adjacent to GEPP	Flowing from East to West
	Zaw Gyi River		Flowing from West to East
Southwest	Thin Daung Village	2.7km	
West	Existing Factory	Adjacent to GEPP	
	Taung Yin Village	2km	
	Belin Village	2.3km	
Northwest	Housings	1.3km	
	Agricultural Land		
	Gravel Production	1.8km	
	Unknown Warehouse	1.6km	

- Major Land use activities within the vicinity of project includes residential areas, agricultural lands, factories, substation, hills and irrigation channel
- Proposed project site is adjacent to the Shan Gan irrigation channel and Shwetangar Channel, originated from Sun Ye Inn, which would probably be one of the distribution channels of harvested rainwater for agricultural activities and other domestic usage.
- The other source of primary water supply is achieved from drainage network of Bobae , entering into Zaw Gyi River.



- Significant land-use practice in the vicinity of proposed project is agricultural land which is followed by commercial factories and residential area

Pilot Site Visit (7.8.2018 – 9.8.2018)



- ❑ Setting up Environmental Sampling Points
- ❑ Initial Social screening survey
- ❑ Inform and discuss project activities with local authorities
- ❑ Tentative Environmental and Social Field Monitoring period will be during 25.8.2018 – 31.8.2018.
- ❑ Public Consultation will be tentative in the last week of August 2018.





List of locations visited during pilot survey

1. Bellin Village
2. Project Site
3. Taung Lwel Village
4. Taung Yin Village
5. Na Bae Pin Village
6. Sun Ye Inn
7. Drainage Network (Shan Kan, Shwe Tha Ngar)



Land Acquisition in Past



1st time land acquisition in 2008
PAP = 16

3rd time land acquisition in 2010
PAP = 2



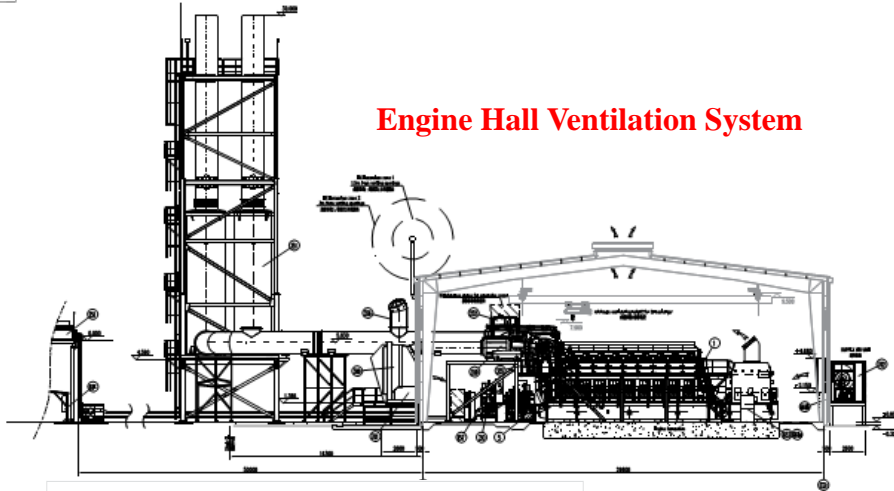




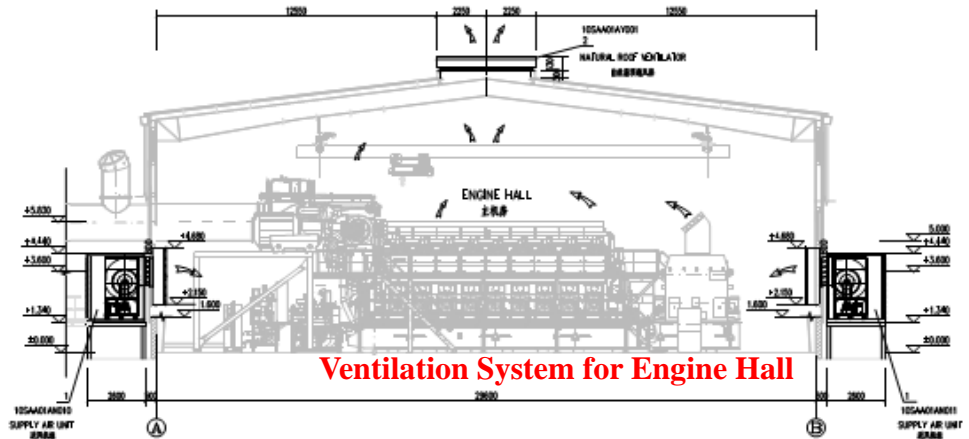
သဘာဝဓါတ်ငွေ့အင်ဂျင်ဓါတ်အားပေးစက်ရုံ (145 မီဂါဝပ်) စီမံကိန်း

Gas Specification and Ventilation System

Engine Hall Ventilation System



Ventilation System for Engine Hall



Gas Specification

SHWE Gas Composition

Component Name	Mole Percent	BTU Gross	Relative Density
C6 + 47/35/17	0.0199	1.05	0.0007
PROPANE	0.0297	0.75	0.0005
i- BUTANE	0.0109	0.36	0.0002
n - BUTANE	32.2 PPM	0.11	0.0001
i - PENTANE	49.7 PPM	0.2	0.0001
n - PENTANE	0.0000	0.00	0.0000
NITROGEN	0.2218	0.00	0.0021
METHANE	99.5529	1007.81	0.5514
CARBON DIOXIDE	0.0491	0.00	0.0007
ETHANE	0.1073	1.9	0.0011
TOTALS	100	1012.18	0.557

Compressibility Factor (1/7)@ 14.73000 PSIA & 60.0 DEG.F= 1.100198

Base Pressures = 14.73 PSI (A)

Gross Dry BTU = 1014.19 Corrected/Z

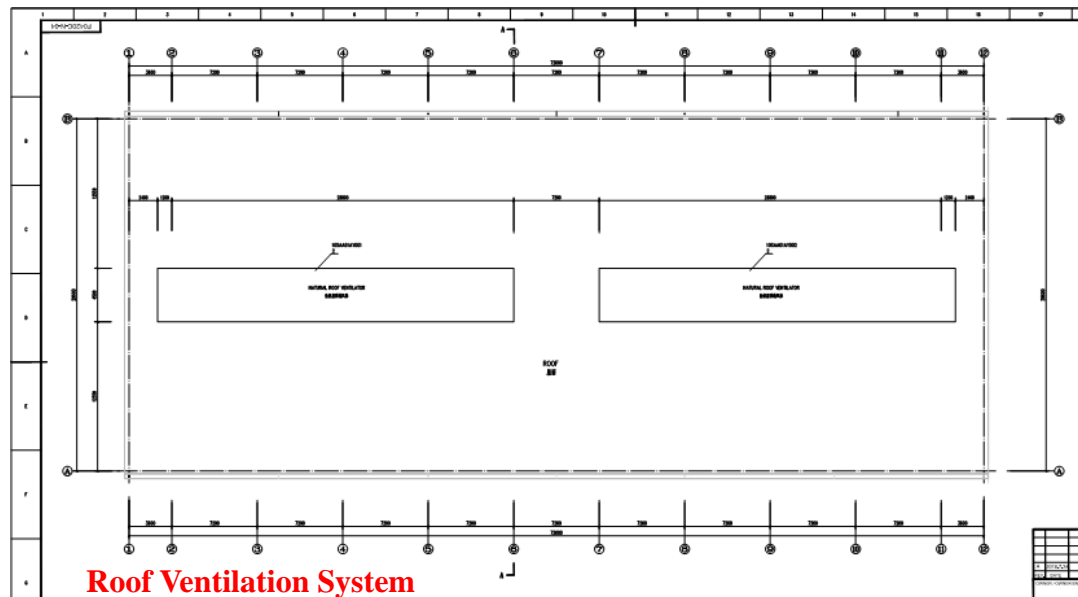
Real Relative Density Gas = 0.5578

Un-normalized Mole Percent = 99.874

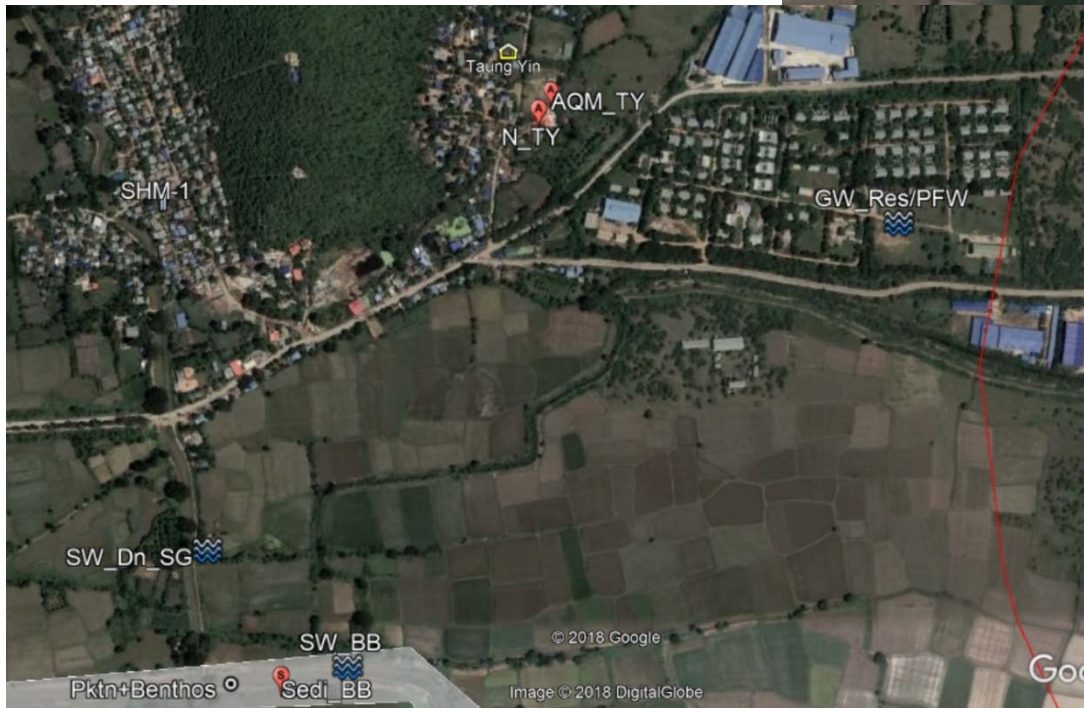
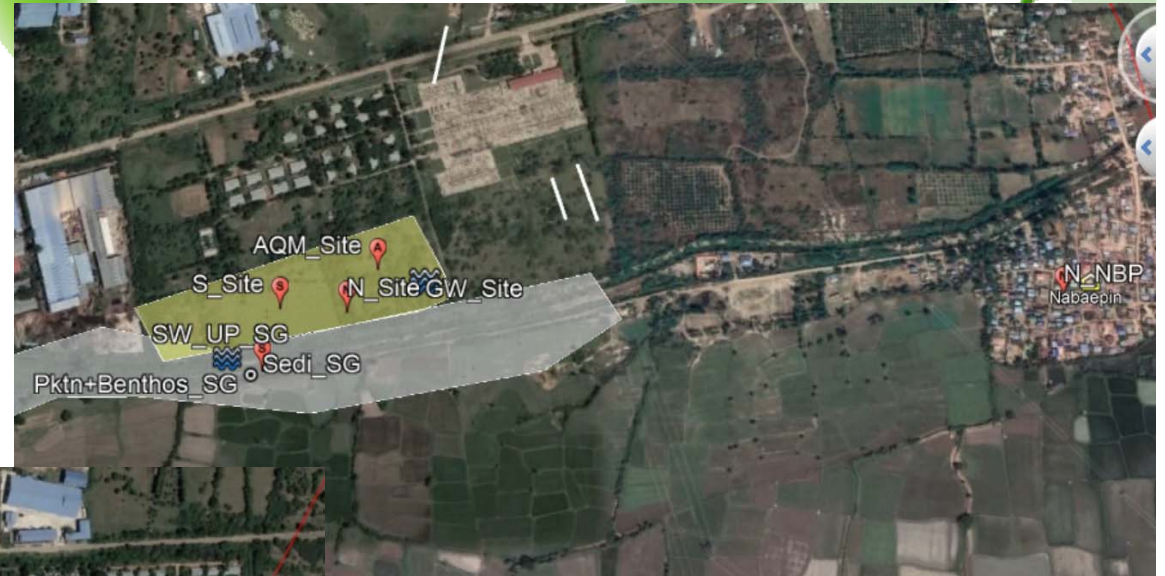
WOBBE = 1357.91

Low potential of SO2 emission

Roof Ventilation System



Environmental Sampling Locations



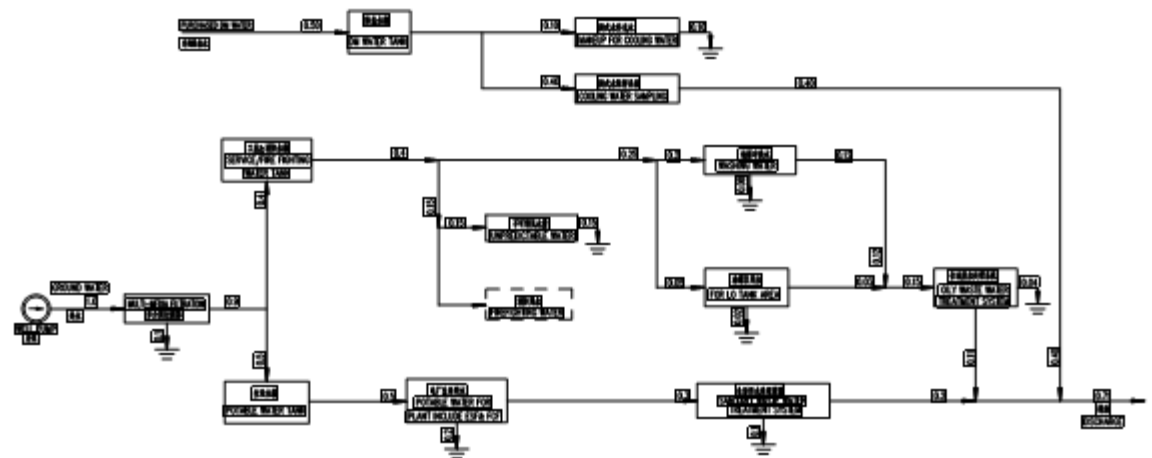
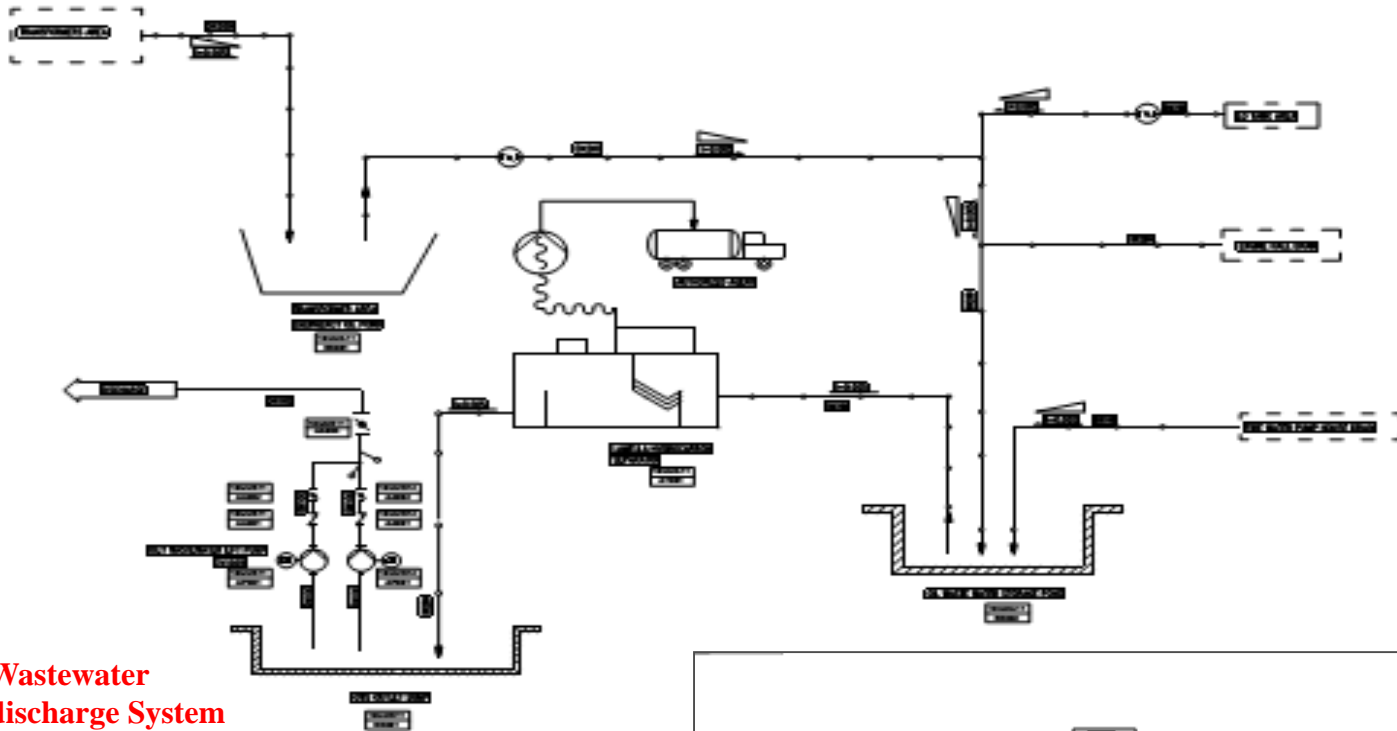
Preliminary Assessment of potential impacts by 145 MW GEPP

SECTION	PROJECT PHASE	POTENTIAL IMPACT	SIGNIFICANCE OF IMPACT (The rating is negative unless otherwise specified)	
			UNMITIGATED	MITIGATED
Flora & Fauna	Construction	Potential fauna loss due to site clearance & pipeline construction	Negligible	
	Operation	Potential fauna loss due to human disturbance	Moderate	
Surface Water, Ground Water Quality & Aquatic fauna	Construction	Potential water quality depletion and fauna damage due to sewage water discharge and runoff	Moderate	
	Operation	Potential water quality depletion and fauna damage due to sewage water discharge and runoff and Oil and chemical spill	Moderate	
Air	Construction	Particulate matters (Dust) emission by building construction, movement of vehicles and soil stripping and exhaust gases emission from non-road vehicles and equipment	Minor	Negligible
	Operation	NO ₂ /CO ₂ emission from stack, exhaust gas emission and potential gas leakage from pipeline	High	
		Cumulative impacts on air quality by means of power plant operation and nearby factories	High	
Noise and vibration	Construction	Activity of vehicles and construction work	Minor	Negligible
	Operation	Operation of Gas Engine activity	Moderate	
Land	Construction	Potential Land Acquisition issues on nearby agricultural land	Moderate	
		Impact on Landscape and Land use Change	Moderate	
		Potential land contamination by waste disposal	Minor	Negligible
	Operation	Potential soil contamination by solid and liquid waste disposal	Minor	Negligible

Preliminary Assessment of potential impacts by 145 MW GEPP

SECTION	PROJECT PHASE	POTENTIAL IMPACT	SIGNIFICANCE OF IMPACT (The rating is negative unless otherwise specified)	
			UNMITIGATED	MITIGATED
Cultural /Heritage Resources	Construction	Potential disturbance on local cultural resources by construction activities	Minor	Negligible
Occupational health & Safety	Construction	Noise and vibration	Moderate	
	Operation	Noise and Vibration	Moderate	
	Operation	Worker health and safety during operation	Moderate	
Population and demographic change	Construction	Population and demographic change due to influx of migrant workers	Moderate	
	Operation	Population and demographic change due to Influx of migrants workers	Moderate	
Public access and movement	Construction	Restriction on public access due to increase of traffic volume and Road Safety	Moderate	
	Operation	Restriction on public access due to increase of traffic volume and Road Safety	Moderate	
Employment and Skill development	Construction	Beneficiary on employment and skill development	Major –Positive	
	Operation	Beneficiary on employment and skill development	Major –Positive	
Local Business	Construction	Beneficiary on local business	Moderate – Positive	
	Operation	Beneficiary on local business	Moderate – Positive	
Country Energy Sector	Operation	Beneficiary on energy sector	Major Positive	

သာဘဝါတ်ငွေ့အင်ဂျင်ဓါတ်အားပေးစက်ရုံ (145 မီဂါဝပ်) စီမံကိန်း
Water Balance and wastewater discharge System





ကျေးဇူးတင်ပါသည်။
လမ်းညွှန်မှုခံယူပါသည်။





REPUBLIC OF THE UNION OF MYANMAR
Ministry of Natural Resources and Environmental Conservation



CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION

(ဤကဏ္ဍအောက်တွင်လုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

No. 0032 Date 15 JUL 2017

The Ministry of Natural Resources and Environmental Conservation, hereby, issues this certificate to the organization under Environmental Impact Assessment Procedure, Notification No. 616/2015.

(ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမိန့်ကြော်ငြာစာအမှတ်၊ ၅၁၆/၂၀၁၅ အရ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် ဤအထောက်အထားလက်မှတ်ကို အဖွဲ့အစည်းအား ထုတ်ပေးလိုက်သည်။)

- | | |
|--|--|
| (a) Name of organization
(အဖွဲ့အစည်းအမည်) | Myanmar Sustainable Development
Engineering Services Co., Ltd. |
| (b) Name of the representative in the organization
(အဖွဲ့အစည်းကိုယ်စားလှယ်၏အမည်) | U Aung Nanda |
| (c) Citizenship of the representative in the organization
(အဖွဲ့အစည်းကိုယ်စားလှယ်၏နိုင်ငံသား) | Myanmar |
| (d) Identity Card /Passport Number of the representative person in the organization
(အဖွဲ့အစည်းကိုယ်စားလှယ်၏ မှတ်ပုံတင်/ နိုင်ငံကူးလက်မှတ် အမှတ်) | 12/ Sa Kha Na (Naing) 001504 |
| (e) Address of organization
(ဆက်သွယ်ရန်လိပ်စာ) | No. 21 (I), U Kyaw Hla Street, 7 Mile,
Mayangone Township, Yangon.
nanda.msde@gmail.com , nanda@m-sde.com ,
09 6160905, 09 799671216 |
| (f) Type of Consultancy
(အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား) | Organization |
| (g) Duration of validity
(သက်တမ်းကုန်ဆုံးရက်) | 31 March 2018 |

(Signature)

Director General
Environmental Conservation Department
Ministry of Natural Resources and Environmental Conservation

Areas of Expertise Permitted
(ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Ecology and Biodiversity
2. Facilitation of Meeting
3. Land Use
4. Legal Analysis
5. Modeling for Water Quality
6. Noise and Vibration
7. Socio-Economy
8. Cultural Heritage
9. Environmental Science & Engineering Management
10. Mangrove Ecology



Proven Record of Customer Satisfaction

- ❖ Environmental and Social consideration into project design of rice mill complex;
- ❖ Design-oriented ESIA
- ❖ Sector-wise study with multidisciplinary;
- ❖ Total number of team member: 89.



Myanmar Japan Rice Industry Co., Ltd.

No. IV (2) Building, Lan 1st Street, Seikkan Nal Myay, Larnadaw Township, Yangon.

To Whom it May Concern

We, Myanmar Japan Rice Industry Company Limited (MJRI), are hereby writing to recommend the provision of ESIA services by Myanmar Sustainable Development Engineering Services Co., Ltd (MSDES).

MJRI is a joint venture of Myanmar Agribusiness Public Corporation (MAPCO) and Mitsui & Co., Ltd. We have utilized MSDES's environmental consulting services for the development of phase I of 500 Ton/Day Integrated Rice Mill Complex (IRCP) Project in Twantay Township, Yangon and has been completely satisfied with the quality of its deliverable and attention provided to key details. We observed that MSDES can absolutely fulfill to meet the expectation of international organization in terms of project milestones/schedule. They have shown strength of team work, technical knowledge and collaboration skills between each study component. They have been responsive to MJRI's requirement and project schedule constraints.

A special high light in evaluation of their services is that MSDES actively involves in technical explanation and meeting with concerned authorities until ESIA project is successfully completed. In ESIA for phase I of 500 Ton/Day Integrated Rice Mill Complex (IRCP), MSDES had conducted following studies;

- 1) Legislation requirement,
- 2) Geology (Sediment and Soil Quality study),
- 3) Surface Water, Ground Water Assessment,
- 4) Biodiversity and Ecological Assessment,
- 5) Noise Impact and Air Quality Assessment,
- 6) Socio-Economic Survey,
- 7) Wastes Management,
- 8) Environmental and Social Management Program,
- 9) Corporate Social Responsibility (CSR),
- 10) Safe Working Practice and
- 11) General outline for Fire Safety.

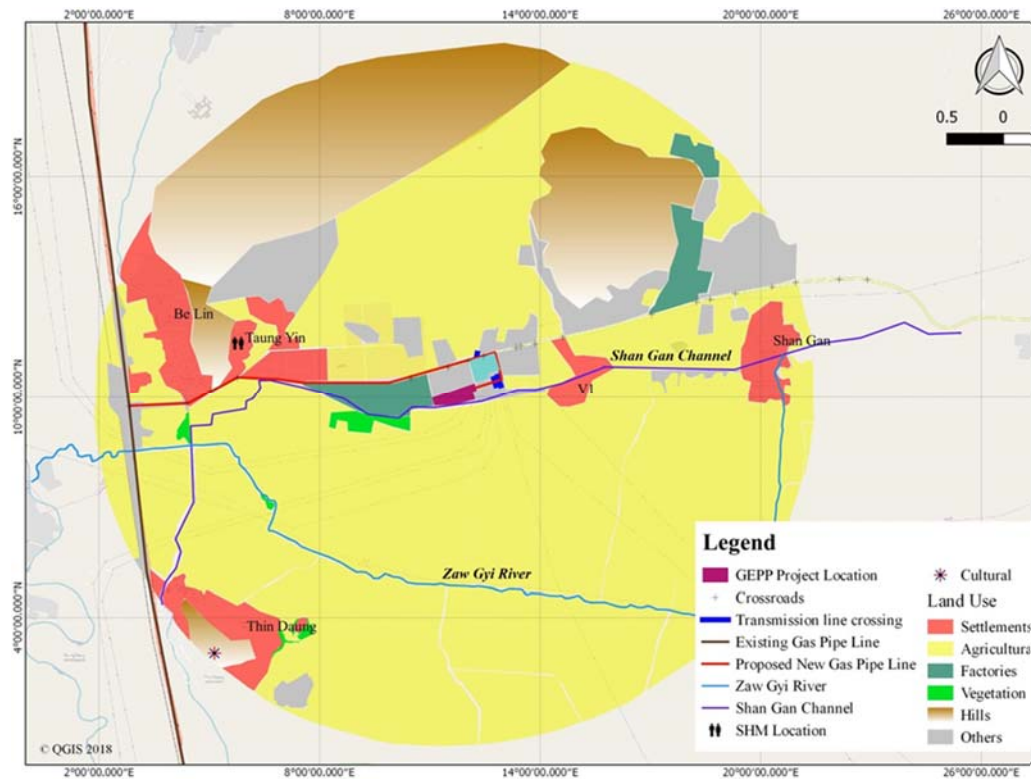
Sincerely

Mr. Minoru Asano
Director
Myanmar Japan Rice Industry Co., Ltd

U Ye Min Aung
Managing Director
Myanmar Japan Rice Industry Co., Ltd

EIA Technical Proposal for Development of 145 MW GEPP, Belin

Doc. No.: TP-MSDES-86/240618_EIA_Power Plant_GEPP_Belin (ver 2.0)



Prepared by Aung Nanda
Myanmar Sustainable
Development Engineering
Services Co., Ltd.

7/15/2018



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1 Brief Project Description

Introduction

The NIHC Consortium which is composed of National Infrastructure Holding Co., Ltd and Myanmar Chemical & Machinery Co., Ltd. have been awarded a contract by the Electric Power Generation Enterprise (EPGE) of the Myanmar Ministry of Electricity and Energy to construct and operate for a period of five (5) years from commencement date of operation a 145 MW Gas-fired Engine Power Plant at existing Power Plant Yard at Belin, Kyaukse Township, Mandalay Region, Union of Myanmar. National Infrastructure Holding Co., Ltd. will be anchor member of the Consortium.

Project Site

Proposed Gas Engine Power Project (GEPP) is located in Bellin Village, Saintgaing Township, Mandalay. The proposed project area is about 3 km away from Yangon-Mandalay Highway. The project is intended to develop in the existing compound of Ministry of Energy, occupying area of 44,159.13 m². Geographical coordinate points of project boundary is presented as per below and project site location is as shown in figure (1).

Coordinate Point

Fence boundary outcomes (WGS84 coordinate system) provided by the EPGE				Fence boundary outcomes (myanmar coordinate system) provided by the EPGE			
A	96:9:11.560015,	21:40:7.260007	85.64	A	205385.547	2398859.605	85.64
B	96:9:12.306304,	21:40:5.070930	84.84	B	205405.867	2398791.739	84.84
B-1	96:9:13.085956,	21:40:2.784032	81.51	B-1	205427.013	2398721.113	81.51
C	96:9:11.036329,	21:40:4.615927	84.44	C	205368.675	2398778.484	84.44
D	96:9:11.836338,	21:40:2.496923	83.73	D	205390.522	2398712.886	83.73
E	96:9:5.330012,	21:40:1.010029	84.19	E	205202.852	2398670.576	84.19
F	96:8:59.160328,	21:40:0.710935	85.00	F	205025.212	2398664.633	85.00
G	96:8:58.480624,	21:40:3.000079	85.51	G	205006.955	2398735.436	85.51
TP01	96:8:57.946621,	21:40:10.018921	87.51	TP01	204995.661	2398951.748	87.51
TP02	96:8:59.945360,	21:40:3.279625	85.09	TP02	205049.922	2398741.543	85.09

Fence boundary outcomes (WGS84 coordinate system) adjusted fence range				Fence boundary outcomes (myanmar coordinate system) adjusted fence range			
A'	96:9:11.553347,	21:40:7.258008	85.64	A'	205385.547	2398859.605	85.64
B'	96:9:12.302536,	21:40:5.066350	84.84	B'	205405.867	2398791.739	84.84
B-1'	96:9:13.107021,	21:40:2.686391	81.51	B-1'	205427.672	2398718.047	81.51
C'	96:9:11.028329,	21:40:4.615927	84.44	C'	205368.675	2398778.484	84.44
D'	96:9:11.840483,	21:40:2.409175	83.73	D'	205391.069	2398710.182	83.73
E'	96:9:5.320719,	21:40:1.079741	84.19	E'	205202.702	2398672.701	84.19
F'	96:8:59.159243,	21:40:0.723682	85.00	F'	205025.195	2398664.998	85.00
G'	96:8:58.636968,	21:40:3.033625	85.51	G'	205011.473	2398736.386	85.51
TP01	96:8:57.946621,	21:40:10.018921	87.51	TP01	204995.661	2398951.748	87.51
TP02	96:8:59.945360,	21:40:3.279625	85.09	TP02	205049.922	2398741.543	85.09



Figure 1. Project Site Location

General Information on GEPP

The modular power plant is designed to use natural gas as the main fuel. The proposed modular plant is designed for base load operation and is equipped with 8 numbers of WARTSILA engines (18V50SG type) as a prime mover. Plant installed capacity and designed output power is (145) MW (8 units x 18 MW). The mechanical and electrical systems are designed with codes and standards by WARTSILA. Ministry of Energy provides natural gas (30) million cubic feet/day to operate GEPP. Generated electricity is scheduled to be supplied from coming February, 2019 after (10) months of construction. Generated power by the proposed GEPP will be supplied to the National Power grid through the existing power distribution of Belin Substation.

According to the agreement with EPGE, plant will be run on 100% load for (7) months and on 50% load for (5) months of the year. Type of constructions & establishments to be involved in the Construction period will be Wartsila Gen-set Building, Switchyard, Main Gas Skid, Control Shed and MOGE Staff Quarters.



Description of Environmental Setting Within (3) Kilometer from Project Area

Area of interest, 3 km from project area, includes residential areas, agricultural lands, factories, substation, hills and irrigation channel (Table 1 and Figure 2). Being located near the boundary of two townships, Sintgaing and Kyaukse, environmental and socials component that need to be assessed in study of EIA might have concerns from authorities of both townships. Significant land-use practice in the vicinity of proposed project is agricultural land which is followed by residential area. The smallest fraction of land use is examined as industrial use and gravel production. Within study area, primary settlements of six villages and population density of Belin and Thin Daung village are relatively higher than that of other villages. Northward direction of study area is primarily covered with elevated land, namely Kein Na Ya Taung (m.s.l 384 meter), which is naturally formed as concave-shape-wind-breaking fence in winter time. In prevailing downwind directions of winter and monsoon (i.e., northward and southward), no residential area is observed.

Table 1. Information of possible receptor within (3) km

Direction	Name of Possible receptor	Coordinate	Distance from GEPP	Remark
North	Belin Substation	21°40'10.30"N, 96° 9'13.41"E	0.36 km	
	Kein Na Ya Taung,	21°40'59.36"N 96° 8'30.87"E	2 km	
	Agricultural Land			
Southeast	Agricultural Land			
East	unknown village (V1)	21°40'3.43"N 96° 9'42.27"E	1 km	
	Shan Gan Village	21°40'17.38"N 96°10'42.51"E	2.8 km	
	Agricultural Land			
South	Agricultural Land			
	Shan Gan irrigation channel		Adjacent to GEPP	Flowing from East to West.
	Zaw Gyi River			Flowing from West to East
Southwest	Thin Daung village	21°38'55.57"N 96° 8'0.44"E	2.7 km	
West	Existing Factory		Adjacent to GEPP	
	Taung Yin village	21°40'18.22"N 96° 8'0.01"E	2 km	



	Belin village	21°40'25.06"N 96° 7'38.04"E	2.3 km	
Northwest	Housings	21°40'10.66"N 96° 8'15.86"E	1.3 km	
	Agricultural Land			
	Gravel Production	21°40'43.85"N 96° 8'17.19"E	1.8 km	
	Unknown warehouse	21°40'19.19"N 96° 8'13.78"E	1.6 km	

Gas Pipeline

10" New gas pipe line (approximately 4.80 miles) will be constructed by the successful bidder along the main street from Tawma Off-take point to project site. According to the project information provided by project proponent, proposed gas pipe line is passed throughout the residential areas, including public access road to connect the existing gas pipeline. It has potential to have effect on community safety.

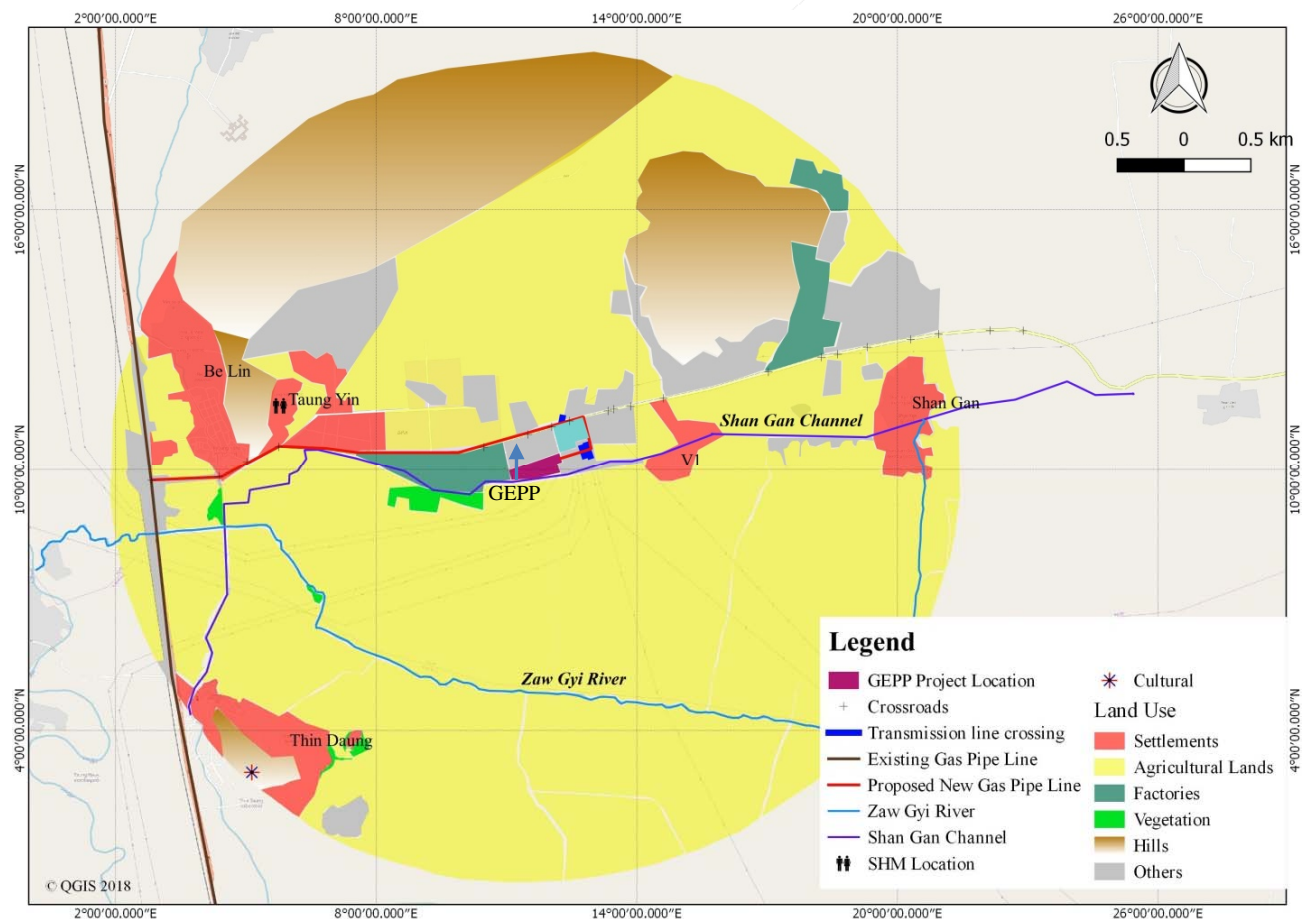


Figure 2. Location and Surrounding Environmental Condition of the Project



Water Supply

Proposed project site is adjacent to the Shan Gan irrigation channel, originated from Sun Ye Inn, which would probably be one of the distribution channels of harvested rainwater for agricultural activities and other domestic usage. The other and primary water supply is achieved from drainage network of Zaw Gyi River. If the industrial effluent is directly discharged into the Shan Gan Drainage, water-receiving-agricultural land can be affected by the pollutant. Ecology of agriculture land and downstream water user might have consequential effect from such a direct discharge from power plant.

2 Scope of Works

The EIA investigation shall include the tasks in following sections outlined.

2.1 Policy, Legal and Institutional Framework

This chapter discusses the policy, legal and institutional framework related to environmental and social management of this Project in substantial details. MSDES will review and update the information in the Scoping Report and Baseline Report, and will clearly identify applicable international and national guidelines and standards that will need to be compliance by the Project as targets for its environmental and social performance both during project pre-construction, construction, operation and decommissioning phases.

MSDES consultant will have responsibility to receive corporate management policy regarding with environmental, social and CSR after discussion with the project developer. The final corporate environmental and social policy, approved by the management of the project developer, will be applied in sustainable management of project developer throughout the project cycle.

Under *Section 7* of the *Environmental Conservation Law* and *Articles 52* and *53* of the *Environmental Conservation Rules* of the Republic of the Union of Myanmar, The Consortium is required to undertake an EIA to obtain an Environmental Compliance Certificate (ECC) for the proposed Project. The Project will be undertaken in line with a number of national standards and laws. Local laws relating to EIA include:

- Environmental Conservation Law (2012);
- Environmental Conservation Rules (2014);
- National Environmental Quality (Emission) Guidelines (2015); and
- Environmental Impact Assessment Procedure (2015).



2.2 Project Alternatives

Report on project alternative requires input of developers like environmental and social consideration to eliminate or reduce negative impacts in design phase and project cycle; MSDES will recommend alternative for environmental management as well. Closer distance to Yangon downtown area and neighboring settlement area is major key factor that needs to be taken account of alternative consideration in sustainable development of proposed 145 MW GEPP Project. MSDES Consultant will discuss with the project developer to verify and confirm various aspects of project relevant to the ESIA.

The following subjects will be covered in the discussion:

- 1) Project location, land acquisition and project boundaries;
- 2) Project components and scope of works in all phase of the project development;
- 3) Project schedule and project design; Environmental and social consideration;
- 4) Project alternatives in engineering design and project management (e.g., stack height, gas pipe line, pollution control, etc.)
- 5) Question and Answer based on Engineering Design and project management;
- 6) Fire and Electrical Hazard Safety; Community Safety;
- 7) Emergency Response Plan
- 8) Corporate Social Responsibilities and local employment;
- 9) Engagement in Public Consultation Meeting;
- 10) Emission Control Facilities (e.g., waste treatment, air pollution); and
- 11) All other relevant information necessary.

2.3 EIA Study Boundary Area

MSDES team will conduct field surveys, in addition to all available secondary data and to collect primary data on the surrounding environment of project site.

The objective of the surveys is to achieve extensive understanding on the existing environmental and social conditions of the surrounding area prior to the project development. Any changes reflecting from project development are expected to be detected and monitoring how environmental and social



condition differs under pre and post-development condition thereby leading to development of effective Environmental Management Plan (EMP).

Range of ESIA study: Field surveys will include both environmental and social surveys within **3 km** range of radius from project boundary. Proposed EIA study will cover project activities of 145 MW GEPP which will be acquired from project proponent.

2.4 EIA Study Components

The environmental studies on ambient air quality, noise, groundwater quality, surface water quality, soil quality, paddy field soil quality, sediment quality, aquatic biodiversity (planktons, benthos and fishes), terrestrial biodiversity (flora and fauna such as birds, mammal, reptile) and environmental geology will be conducted.

The surveys will cover the following environmental components:

- Physical Components including meteorology, topography, geological characteristics, soil quality, air quality, noise, groundwater quality, surface water quality, soil and sediment.

2.4.1 Water Environment Assessment:

According to IFC Guidelines for Thermal Power Plant, effluent from the proposed project shall comply with the following effluent guidelines: pH, TSS, Oil and Grease, Total Residual Chlorine, Chromium (Total), Copper, Iron, Zinc, Lead, Cadmium, Mercury, Arsenic, Temperature increase. Parameters of water that will be measured in assessment of surface water (3 samplings) and groundwater (2 sample) in EIA study are chosen as same parameters stated in IFC guideline nonetheless, for the monitoring purpose of drinking water during the phase of project life cycle, parameters stated in WHO guideline should be measured.

Sampling location of freshwater is very crucial in this project. Why? Possible waste water discharge from (i.e., effluent emission) from the project is flown toward downstream of Shan Gan channel together with irrigation water originated from Sun Ye Inn until it meets with the Zaw Gyi River and thereby, it continues its flow into the agricultural land as irrigation drainage network in southern part of the study area. From the perspective of pollution monitoring, it is important to understand the existing water quality before it leaves the project proposed.

2.4.2 Geological Environment

As the engine is driven by natural gas, deposit from flue gas emission would have unlikely to have impact on soil chemistry of neighboring paddy fields and bare soil, comparing with other fuel types such as biomass, coal, heavy fuel oil, etc. It is anticipated that oil spill from storage facilities, improper



handling in fuel transfer, and mechanical yard would have contamination in project soil only. Total number of soil sapling location for bare soil and sediment are three. The following 30 parameters will be analyzed in soil and sediment samples: LOI, Nitrogen, Phosphorus, Sulphate, Chloride, Arsenic, Mercury (if measurable in national lab), Lead, Chromium, Cadmium, Copper, Nickel, Zinc, Potassium, Manganese, Antimony, Silver, Moisture, pH (Soil water), EC, Texture. If soil test has already performed, bore hole results is requested.

2.4.3 Air and Noise Environmental Assessment

The surveys will focus on the data and information that are relevant and needed for the EIA. Possible significant impact induced through life cycle of Power Plant is degradation of ambient quality in its air shed. After taking anticipation of possible downwind receptors as per seasonal prevailing wind direction, measurement of air quality will be conducted at 2 locations (i.e., project site, residential area), continuously for 24 hours. In the airshed of project, Kein Na Ya taung is naturally formed concave-shaped-wind-breaking fence in winter, this may result air profile to be more stable relatively. Desk study showed that no residential area is observed in prevailing downwind direction of both winter and monsoon. Measurement of ambient sound level will be measured, coupling with air measurement but there is one more additional sampling point, all together 3 locations.

2.4.4 Biological Environment

Biological Components on aquatic ecology (in term of plankton, benthos, fish), and terrestrial biodiversity (in term of flora and fauna species in study area) will be studied to cover proposed project site, along the segment of Shan Gan channel and Zaw Gyi River and paddy field.

2.4.5 Socio-Economic and Public Health Assessment

Socio-Economic Components including socio-economic condition and perception on the proposed project, livelihood, utilization of irrigation water through Shan Gan and Zaw Gyi channel, , public health, and needs of community, in region of study (i.e., 3 km range of radius from project boundary). The social surveys will include collection of primary data as well as secondary data 2 times of stakeholder meetings (i.e., 1st and feedback meetings) at 1 location (Belin or other relevant location), where are the most likely to be affected by project activities, household surveys and Focus Group Discussion (FGD) to cover project area and vicinity. Public health survey is designed to conduct with household survey.



Quantitative Household Survey

Quantitative household survey that aims to generate a baseline description of pertinent demographic and socioeconomic characteristics of the project area will be carried out. Open-ended items that tap the community perceptions, attitudes, and opinions on the proposed project will also be formulated in the questionnaire.

2.4.6 Cultural Heritage Assessment

Environmental aspects of project activities have low possibilities to have impact on cultural issue except excavation activities at site. MSDES will include legal requirement for cultural heritage in the section of legal framework for proposed project and current EIA proposal does not consider cultural heritage assessment. If ECD requires cultural assessment in approval of scoping report, consultancy fee for cultural assessment can be submitted separately. However MSDES recommends project proponent to include this study component in ESIA study. Cultural Components includes existing places of cultural, historical, and religious importance.

2.5 Impact Assessment

Based on the updated project information and the surrounding environment, the Consultant will investigate all environmental and social impact issues identified for all project phases (Pre-Construction Phase, Construction Phase, Operation Phase, and Decommissioning Phase). MSDES would like to stress to the fact that identification of impact assessment for the decommissioning phase is likely to be general and relatively low accuracy because of the possible land use changes and presence of several uncertainties over long period.

2.6 Cumulative Impact Assessment

Possible air impact is considered as cumulative impact. The cumulative impact assessment will be examined by integrating studies of all components. Consultant need to consider impact assessment and provide mitigation measure with monitoring program.

2.7 Environmental Management Plan

The Consultant will prepare an EMP covering mitigation measures, monitoring and evaluation, and implementation arrangements for environmental management throughout the project development (pre-construction, construction, operation and decommissioning phases).

After evaluating the environmental impacts due to the proposed project, the other important portion is to prepare Environmental Management Plan (EMP). EMP is a site specific plan developed to ensure



that the project is implemented in an environmental sustainable manner where all contractors and subcontractors, including consultants, understand the potential environmental risks arising from the proposed project and take appropriate actions to properly manage that risk. EMP also ensures the project implementation is carried out in accordance with the design by taking appropriate mitigate actions to reduce adverse environmental impacts during its life cycle.

The key benefits of the EMP are that it provides the organization with means of managing its environmental performance thereby allowing it to contribute to improved environmental quality. The other benefits include cost control as improved relations to the stakeholders. Proposed project will include the following essential parts of EMP (Table 2).

Table 2. EMP content

No.	Description
1.	<p><i>Environmental Management Plan</i></p> <p>(a) Mitigations Measures for Anticipated Environmental Impacts;</p> <ul style="list-style-type: none"> ▪ Mitigation Measures for Pre-construction Phase ▪ Mitigation Measures for Construction Phase ▪ Mitigation Measures for Operation Phase ▪ Mitigation Measures for Decommissioning Phase <p>(b) Environmental Monitoring Program;</p> <ol style="list-style-type: none"> 1. Environmental Monitoring Parameters and Responsibilities; 2. Proposed Monitoring Guidelines and Standards; 3. Proposed Environmental Management Cell; 4. Reporting of Monitoring Results; <p>(c) Cooperate Social Responsibility (CSR) Program;</p>
2.	<p><i>Other Related Management Plan</i></p> <ol style="list-style-type: none"> 1. Recommendation for Safe Working Practice; 2. Disaster Management Plan; and 3. Emergency Response Plan

2.8 Public Consultations and Disclosure

Consultations in the form of focus groups with possible stakeholders, community members, visitors and local INGOs or/and LNGOs and other interested organizations will be conducted to identify their needs, interests and expectations, and to assess their attitudes towards project and opinions about



potential impacts on physical environments, socioeconomic, community health and safety and cultural issue.

There will be two public consultation meetings during the process of EIA study.

1) Stakeholder meeting:

Purpose: Establishment of project transparency; to explain the role of MSDES and applied environmental practice including mitigation measure, compensation program and Corporate Social Responsibility (CSR); to inform project description, to explain possible impacts by project activities and study components; to identify project perception by local community and stakeholders; to record and incorporate concerns, suggestion, and vision in EIA scoping proposal which has to be submitted to MONREC; to collect information on community requirements and concerns for consideration of compensation program and CSR.

2) Feedback stakeholder meeting/presentation :

Purpose: To inform the result of studies, mitigation measure taken for potential impacts, to explain possible technical solutions for control of pollution and to inform limitation of current study; to discuss about applied compensation and CSR program which are included in EIA study report; to present follow up which is compliance with the report by key representatives of project developer; to receive suggestion, comments and opinion from stakeholders regarding with applied environmental study and proposed Hydropower projects

3 Content on EIA Report

The content on EIA report will followed to Environmental Impact Assessment Guideline, 2014 include:

Table of Content

List of Tables

List of Figures

List of Abbreviation

EXECUTIVE SUMMARY

PART 1: Legal Requirement; Standards and Codes; Project Information; EIA Methodology; Baseline Survey; Possible Impacts; Alternatives



- 1 ENVIRONMENTAL POLICY, LEGAL AND ADMINISTRATIVE FRAME WORK
- 2 BACKGROUND INFORMATION OF THE PROJECT
- 3 ENVIRONMENTAL SETTING AROUND THE PROJECT
- 4 APPROACH STRATEGIES OR APPLIED METHODOLOGY
- 5 DESCRIPTION OF THE ENVIRONMENT; BASELINE STUDY
- 6 ANTICIPATED ENVIRONMENTAL IMPACTS
- 7 ALTERNATIVE

PART 2: Socio-Economy, Health and Stakeholder Meeting

- 8 SOCIAL IMPACT ASSESSMENT
- 9 HEALTH IMPACT ASSESSMENT
- 10 PUBLIC CONSULTATION AND PARTICIPATION

PART 3: Environmental and Social Management; Compensation and CSR; Special Chapter

- 11 ENVIRONMENTAL MANAGEMENT PLAN (EMP)
- 13 SPECIAL CHAPTER
- 15 CORPORATE SOCIAL RESPONSIBILITY (CSR) PROGRAM
- 16 SUMMARY, RECOMMENDATION AND CONCLUSION

REFERENCES & Annex

4 Deliverable Report and Schedule (Table 3 & Appendix 2)

Table 3. Deliverable Report & EIA Implementation Schedule

Document	Schedule	Submission
Final draft ESIA report	<ul style="list-style-type: none"> ❖ Due to the difficulty in field study during raining season, preparation of scoping proposal will be carried out together with initial public meetings immediate after contract date. Approximately preparation of scoping proposal will be 1 or 1.5 month. ❖ Submission of final draft EIA report will be 4 or 5 months from completion date of field study if (1) no delay by force of majeure, (2) no interferences or disturbances with EIA activities, (3) in time 	3 copies after receiving final comment and suggestion from ECD.



	<p>delivery of project information by GPT and (4) not more than 2 months for lab analysis.</p> <p>❖ If any changes in report submission schedule, MSDES will inform to Developer.</p>	
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Complete version of ESIA report will be prepared and revised by MSDES. Then, it will be submitted to the client.

4.1 Terms and Condition/Remarks:

The following collaboration is requested from project developers, at least but not limited to;

- 1) Current EIA sampling design and commercial proposal are prepared based on the information provided by project proponent and desk study which is not much accurate as result of field preliminary survey and it means that current EIA sampling design and commercial proposal (CP-MSDES-86/240618_EIA_Power Plant_GEPP_Belin) may vary.
- 2) If there are additional studies required by ECD during the process of scoping approval and EIA review, which are beyond technical proposal of MSDES, additional consultancy fee to fulfill such requirements will be submitted.
- 3) MSDES will arrange ESIA team mobilization during the study period.
- 4) Commercial proposal does not include the accommodation and transportation expenditure for MSDES activities such as (1) more than 3 times of Nay Pyi Taw Trips for meeting with ECD and (2) environmental and social study outside of 3 km from project area.
- 5) During the field study, representative from project proponent team is requested to engage and assist the team MSDES.
- 6) Total number of MSDES staff who will engage in Nay Pyi Taw Trip will be 2~3 person and it is expected that number of ECD meeting is 3 times (i.e., authority meeting, initial Review Team meeting, 2nd Review Team meeting).
- 7) Although accomplishment of contract's terms and conditions end at submission of draft final EIA report to Client (Figure 3), MSDES will engage ECD review meetings with project proponent team to response the comments and suggestion from Review Team Committee and submit final report with response and modification. Client is required to submit it to MIC or relevant Ministry.



- 8) Information on project information (engineering design and other relevant project establishment and operation) is required to be delivered by project proponent before impact assessment which will be conducted immediately after completion of baseline field study.
- 9) Due to the necessity of effective response to the questions raised by stakeholders, key representative person who can make decision is strongly requested to attend public meetings.
- 10) Commitment letter for environmental and social management plan, CSR and legal requirement is the requirement of ECD and MSDES will request this letter at that time of report submittal.
- 11) Project budget associated with pollution control, implementation of environmental and social management plan will be requested to inform the public and authorities. Such information will be disclosed to the public and interested parties in the form EIA report.
- 12) Strong collaboration with project proponent is required for sustainable development. MSDES request representatives from project proponent team to assist and accompany MSDES field survey team during their studies.

5 Standard EIA Process of MSDES

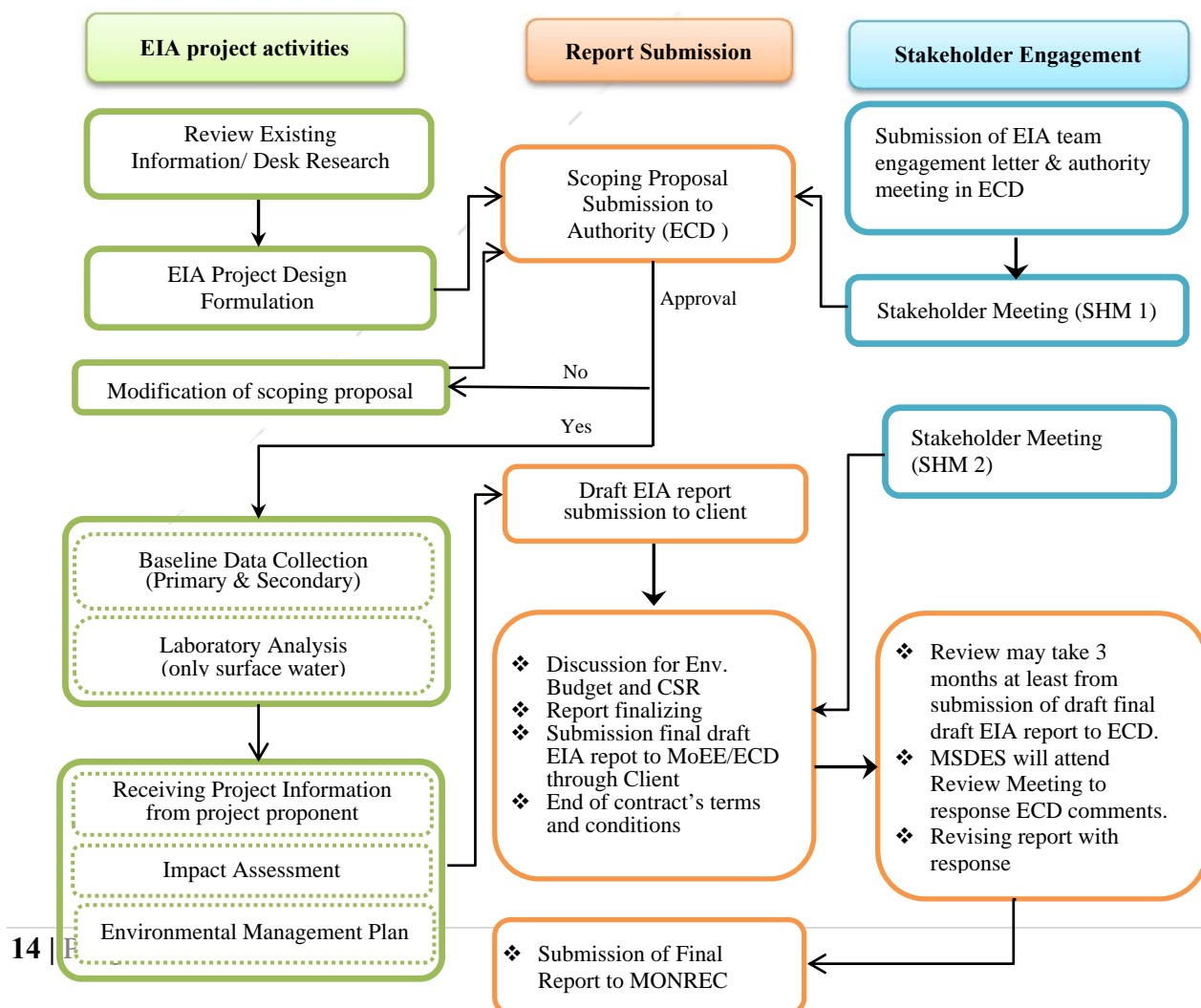




Figure 3. Standard EIA process taken by MSDES

ECD = Environmental Conservation Department

MONREC = Ministry of Natural Resources and Environmental Conservation

MIC = Myanmar Investment Commission

Remark: *Although accomplishment of contract's terms and conditions end at submission of draft final IEE report to Client, MSDES will engage ECD review meetings together with project proponent team to response the comments and suggestion from Review Team Committee and submission of final report with response and modification. Client is required to submit it to MIC or relevant Ministry*

6 Consulting Firm Information

6.1 General Information

Consultant Name:	Myanmar Sustainable Development Engineering Services Co., Ltd. (MSDES)
Transitional Registration No.:	0032
Country of Incorporation:	Myanmar
Acronym:	MSDES
Representative:	Aung Nanda
Proposal authorized by:	Aung Nanda
Position:	Managing Director
Address:	No. 651, Airport Avenue Lane 1, Sawbwarkyi Gone, Insein Township, Yangon, Myanmar

MSDES, a formation of multi-disciplinary team, is designed to provide comprehensive engineering and management solution for urgent issues of our national requirement toward sustainable development; MSDES is committed to contribute our strength (knowledge and experience) in industrial development, rural area development and environmental conservation. MSDES's professional engineers and environmental scientists tackle problematic issues, arising from industrial development with the best practice engineering solutions based on scientific investigation results. MSDES was established in early 2012 with the vision of "MSDES cares for the developments that



meet current and future needs of our society”. Since establishment, MSDES emphasize, to achieve sustainable development, on the following areas:

- ❖ Environmental, Socio-economic and Health Impact Assessment,
- ❖ Dam Impact Assessment/ River and Lake Ecology Assessment,
- ❖ Rural area development; transportation, energy, infrastructure,
- ❖ Environmental Monitoring.

MSDES is collaborating with its green network such as

- ❖ Myanmar Environment Institute (MEI) for capacity build up through research collaboration and knowledge upgrade,
- ❖ Sydro Consult GmbH (Germany) for dam breaking study
- ❖ Saitama University (Japan) for International Research Collaboration, Technical Transfer and Knowledge Upgrade.

MSDES is the first local consulting company who provides ESIA review consultancy service to Environmental Conservation Department, Ministry of Natural Resources and Environmental Conservation (MONREC) for Offshore Oil and Gas exploration and drilling Projects (AD-7 & A6); familiarity with IFC guidelines and depth understanding on those internationally-accepted-industrial practices were well developed through experiences as both ESIA practitioner and reviewer.

MSDES also has a proven record of accomplishment of ESIA project for the development 50 MW Gas Engine Power Plant which is located inside the compound of Ywama Power Plant and well understanding on environmental setting of subject project would help in project formulation and design in ESIA study.

The consultants from MSDES are well qualified in their relevant fields and most are lecturers, associate professors and professors at Universities. They offer many years of experience in comprehensive environmental and socio-economic study.

U Aung Nanda, Managing Director of MSDES, hold a master in Engineering and Environmental Science obtained at the Saitama University in Japan and bachelor degree in Electrical Power Engineering. He has 15 years of experience in environment studies.

His expertise covers cumulative and cross-sectors assessments integrating environment, engineering, water and waste management and stakeholder involvement. He is a member of Myanmar Engineering Society, Myanmar National Committee for Large Dam (MNCOLD) and co-founder of Myanmar Environment Institute (MEI).



MSDES is a registered third party firm (transitional registration no.: 0032, Appendix 1) of ECD who is licensed to conduct ESIA for the development projects. Furthermore, MSDES consultancy team member are certified registered specialist in their own study area (Table 4).

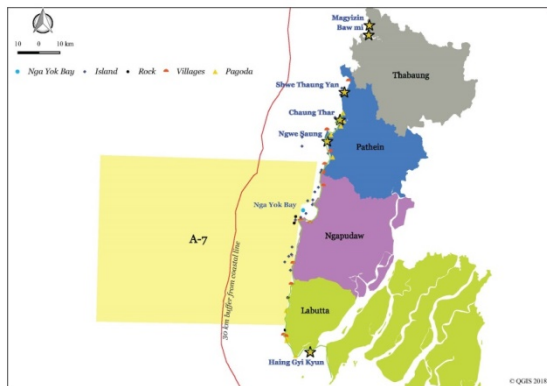
Table 4 List of MSDES's Certified Consultants

EIA study component	Key Practitioner	Transitional Consultant Registration No.
Water Environment / EIA Project Design & Management	Aung Nanda	10112
Environmental Science and Engineering Management Plan/System (EMP/EMS)	Aung Nanda	10112
Noise Assessment	Aung Nanda	10112
Leal requirement	Chit Su San	10117
Air Quality Assessment	To be advised later	TBA
Ecology and Biodiversity	Prof. Dr. Myint Aung	10115
Socio-economic Impact Assessment (SIA)	Dr. Than Aung Htwe	10116
Social Management Plan & Corporate Social Responsibility	Dr. Than Aung Htwe	10116
Cultural Heritage Assessment (Optional)	Dr. Pyiet Phyo Kyaw	10114
Health Impact Assessment	Dr. Kyaw Maung Maung Hein	10118
GIS/RS	Htet Akar Soe	10113
Engineering Analysis	Win Myint (Retired Director of MOGE)	TBA
Safe Working Practice	MSDES	
Waste Management	Aung Nanda	
Study integration and Review	U Aung Nanda	
Project Management Team	MSDES	
Social Surveyor team	MSDES and Local Student	

Remark: Estimated total number of field members is 20. Team member of ESIA study may change based on project requirement and ESIA study design without prior notification.

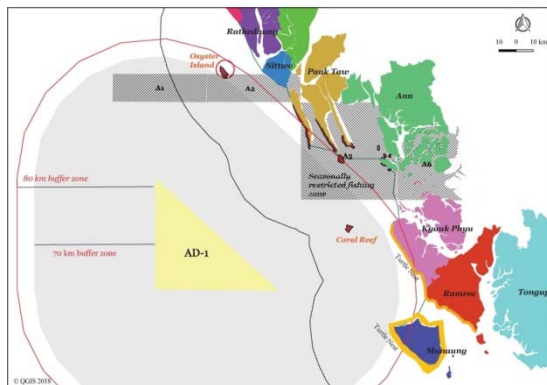


6.2 Project Track Record- ESIA, Review Consultancy



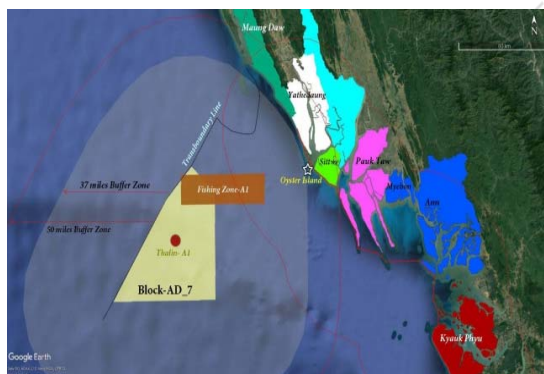
ESIA review for A7 (February 2018-Ongoing)

Ministry of Natural Resources and Environmental Conservation (MONREC) appointed Myanmar Sustainable Development Engineering Services Co., Ltd. (MSDES) to provide consultancy service to review ESIA reports for deep water offshore drilling program of A-7 (joint venture of Woodside, BG Myanmar and MPEP) in Myanmar sea near Rhakkhine coast.



ESIA review for AD1 (February 2018-On going)

Ministry of Natural Resources and Environmental Conservation (MONREC) appointed Myanmar Sustainable Development Engineering Services Co., Ltd. (MSDES) to provide consultancy service to review ESIA reports for deep water offshore drilling program of A6 (joint venture of Woodside and CNPCI).



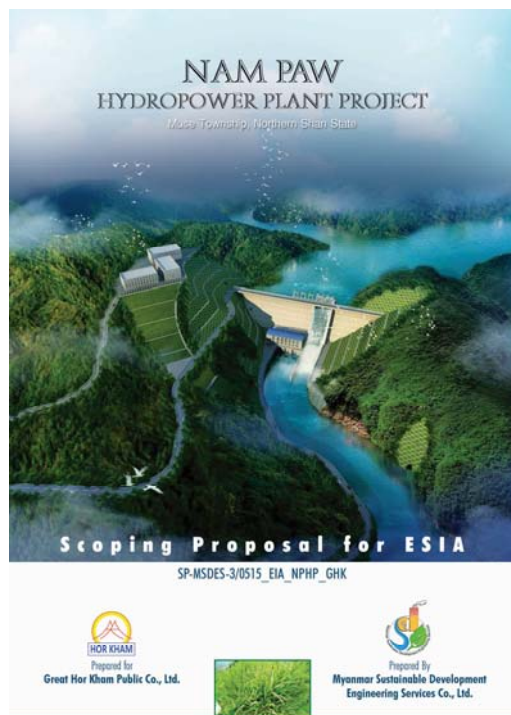
ESIA review for AD7 (November 2016-May 2017)

Ministry of Natural Resources and Environmental Conservation (MONREC) appointed MSDES to provide consultancy service to review ESIA reports for deep water offshore drilling program of AD-7 (joint venture of Woodside and POSCO Daewoo) in Myanmar sea near Rhakkhine coast.



ESIA review for A6 (November 2016-May 2017)

Ministry of Natural Resources and Environmental Conservation (MONREC) appointed MSDES to provide consultancy service to review ESIA reports for deep water offshore drilling program of A6 (joint venture of MPRL E&P Pte Ltd., Woodside Energy Myanmar Pte. Ltd. and Total E&P Myanmar).



ESIA for 20 MW Nam Paw Hydro Power Project, Northern Shan State (December 2014-Ongoing)

Proposed project will fulfil the regional and national electrical requirement through connecting national grid. Feasibility study was conducted by Hunan Hydro & Power Design Institute, China and Myanmar Sustainable Development Engineering Services Company Limited (MSDES) took responsibility for Environmental, Socio-economic and Health Impact Assessment. Dam breaking analysis was being conducted by SYDRO, Germany. MSDES had collaboration with Sydro in the process of Flood hazard map development such as engagement in stakeholder engagement (local authority and heads of village) and providing local information. Total number of MSDES team who involved in this study was 67 persons in total.

Scoping report was already approved by ECD. Baseline study was conducted spatially and temporally.



ESIA for 500 Ton/Day Integrated Rice Complex Project in Twantay (December 2013-August 2015)

Environmental and Social Impact Assessment for sustainable development of 500 Ton/Day Integrated Rice Complex Project and reuse of rice husk as biomass or renewable energy for electricity production. Project proponent is Myanmar Japan Rice Industry (JV of Myanmar Agribusiness Public Corporation and Mitsui & Co., Ltd.). Distinct feature of this project is reuse of rice husk for power generation required for its own plant. Total number of MSDES team who involved in this study was 89 persons in total. Findings from ESIA study, National Emission Guidelines and MSDES's recommendation were taken into account as Input of environmental and social consideration to project design.



ESIA for 50 MW Gas Engine Power Plant (Ywama) (June 2013-November 2013)

Development of proposed gas engine power plant (50 MW) is private sector participation in Myanmar Electric Power Industry; Myan Shwe Pyi Limited contracted as turnkey contractor and UPP Power (Myanmar) Limited contracted as a project developer. Although there are existing Gas Turbine Power plants, within and in the vicinity of Yangon, such as Ywama, Taketa, Ahlone and Hlawga, there has been inadequate supply of electricity to suffice the peak load demand especially in the drought season. Fast track solution and low carbon electricity generation like development of Gas Engine Power Plant (GEPP) is considered for optimization of power supply and gap reduction between power demand and supply in order to alleviate power shortage in Yangon District.

6.3 Capability – Selected Project Experience

MSDES's relevant Experiences

Relevant project experience of the members of MSDES is shown in the table (5) below. The required experiences (listed in columns) have been derived from requirement of proposed project.

Table 5. Relevant Project Experience

Project	Regional Experience	Power /Energy Sector	Gas fired Power Generation	ESIA review experience	Familiarity with IFC guidelines
ESIA for 50 MW Gas Engine Power Plant (Ywama), Location: Ywama Power Plant, Insein Township, Yangon, Myanmar Client: UPP (Myanmar) Project Date: February 2013	√	√	√		√
ESIA for 20 MW Nam Paw Hydro Power Plant Location: Muse, Northern Shan State, Myanmar Client: Great Horkham Public Co. Ltd. Project Date: December 2014	√	√			√



Nam Paw Hydro Power Project; collaborative study with Sydro Consult GmbH for Emergency Preparedness Plans, stakeholder involvement, awareness-raising; Location: Muse, Northern Shan State, Myanmar Client: Great Horkham Public Co. Ltd. Project Date: December 2014	✓	✓			✓
ESIA Review for A7 & AD1 Offshore Drilling Program Location: Myanmar Client: Environmental Conservation Department, Ministry of Natural Resources and Environmental Conservation Project Date: January 2016-April 2017		✓		✓	✓
ESIA Review for A6 & AD7 Offshore Drilling Program Location: Myanmar Client: Environmental Conservation Department, Ministry of Natural Resources and Environmental Conservation Project Date: November 2016-May 2017		✓		✓	✓
*Provision of EIA review consultancy service to review committee of MoECaF/MONREC for c.a 20 numbers of EIA reports in the following developments: energy sector (i.e., onshore oil and gas exploration, refinery plant , power generation by hydropower, coal fired power, natural gas, and solar power), industrial sector (i.e., beverage production, acid plant), mining sector (i.e., purification, gold mining) and plantation and oil mill. Location: Myanmar Client: Knowledge Space Project Date: 2015 ~ 2016	✓	✓	✓	✓	✓
*Baseline study for the Development of 500MW CCGT Gas Turbine (Myanmar) Location: Thaketa, Myanmar Client: REM Project Date: 2012	✓	✓	✓		
*Development of Yangon River Oil Spill Emergency Preparedness Plan Location: Yangon River Client: Department of Maritime Administration Project Date: April 2016 ~ 14.2.2017	✓				✓
Development of National Oil Spill Emergency Preparedness Plan Location: Yangon River Client: Department of Maritime Administration Project Date: 29 th March 2017 ~ present	✓				✓
*Environmental Impact Assessment of Power Transmission Line (EIA PTL) Baluchaung-Shwe Myo & Upper Ye Ywa-Shwe Saryan, Myanmar Location: Baluchaung-Shwe Myo & Upper Ye Ywa-Shwe Saryan, Myanmar Client: Ministry of Electric Power Project Date: 2011	✓	✓			



EIA 500Ton/day Integrated Rice Complex Plant, (Reuse of rice husk for power generation) Location: Twantay, Yangon, Myanmar Client: Myanmar Japan Rice Industry (JV of MAPCO and Mistui & Co.Ltd.) Project Date: 2013~2015	√	√			√
*Review of ESIA for Letpadaung Copper Mine; Location: Monywa, Sagaing, Myanmar Client: Environmental Conservation Department Project Date:2013-2014	√			√	√
*Rapid assessment of Letpadaung Copper Mine; Location: Monywa, Sagaing, Myanmar Client: Special Investigation Committee Project Date: December 2012~ February 2013	√			√	√
*Engineering, Procurement and Construction of 33:11 kV substation Location: Hlaing Thet, Meikhtilar, Myanmar Client: Project Date: 2012	√	√			

Remark: Project name with asterisk (*) are individual engagement by Aung Nanda.

6.4 Key Personnel

Aung Nanda (Managing Director/MSDES team leader/Environmental Safeguard)

Transitional Registration No.: 10112

Aung Nanda is well experienced with the backgrounds of both Environmental Science and Human Engineering (Saitama University, Japan) and Engineering in Electrical Power (Yangon Technological University, Myanmar). His qualifications in both environmental studies and engineering fields provide valuable insight into the imperatives of project development and administration.

Along with the 15 years of his professional experiences (1998-present), he has been involved in a wide spectrum of environmental science and engineering in the following areas;

- ❖ Environmental Impact Assessment, Environmental Audit and Ecosystem Rehabilitation,
- ❖ Pollution Control and Waste Management,
- ❖ Aquatic Ecosystem Monitoring by using bio-indicators (i.e., aquatic insect),
- ❖ Risk Assessment, Site Inspections and
- ❖ Tendering, Project Management.

He has 8 years of research experience (2001-2009) in river, dam ecology and mangrove ecosystem and during his research period, he reported his scientific works in 5 international publications. Moreover, His 5 years Ph.D. work, ecological impact assessment of pre and post dam installation in



Takizawa, Chichibu Prefecture (2004-2009) is one of his core specializations in evaluation of watershed ecology due to anthropogenic factors.

In the sector of Industrial development, he provides optimum infrastructure design, developed from environmental engineering point of view, with Integrated Management Systems (IMS), skills and experience in order to help achieve the sustainable project development.

Apart from his management role, he remains active in research collaboration and investigations with Department of Environmental Science and Technology (Saitama University, Japan) on ecological assessment of Ayeyarwaddy River for water-basin management and headwater in Chin State and environmental conservation management. He is one of the founding members of Myanmar Environment Institute (MEI) and currently offering aquatic environment and water management courses.

Prof. Dr. Myint Aung (Biodiversity, Ecology and Flora)

Transitional Registration No.: 10115

Flora expert Dr. MyintAunghas been working in the environmental consultancy industry for many years. He is a graduate of the University of Yangon where he was awarded an MSc in Tissue Culture. Dr. Myint Aung holds a doctorate degree of *Environment and Natural Science from Yokohama National University, Japan*.

His environmental project experience includes Environmental Impact Assessment on Flora of Htamanthi Hydro-power and Multipurpose Dam (2006), Assessment of species diversity & floristic composition of central dry zone forest emphasized on Powintaung Reserved Forest, Sagaing Division & Shinmataung Reserved Forest, Magway Division (2008), Environmental Baseline Study, Monitoring and Phytosociological Study on the Flora of MICCL S&K Project in Monywa (2008), Geochemical, Hydrological and Geobotanical Investigation in Mignon Area, Yangon Region and Meyon Area, Mon State, Wastewater Management of the Biopharmaceutical Plant in Hlegu Township, Yangon Region, Assessment of plant species diversity and plant community structure in Ywe-ngan Township, Southern Shan State, and Forest Dynamics Research of Endemic Species in the Tanintharyi Nature Reserve (2012).

He has done the particular researches on the Effect of growth factors on growth of Dendrobium Madam Udom Sri, In vitro Propagation and In vivo Blooming of Dendrobiummoschatum Swartz, Effects of Different Media and Growth Regulators on In vitro Culture and In vivo Blooming of



Rhynchostylisretusa (L.) Bl, and Physiological Study and Assessment of Bio-ethanol Productivity of Sorghum bicolor (L.) Moench (Sweet Sorghum).

Dr. Myint Aung's outstanding publications comprises Phytosociological study of mangrove vegetation in Byone-hmwe Island, Ayeyarwady Delta, Myanmar -Relationship between floristic composition and Habitat-; Mangrove Science, Japan. Vol. 3, 7-23, 04, Ecological study of mangrove vegetation in the Ayeyarwady Delta, Myanmar; ITTO, online article, 2004 (Japan), Assessment of species diversity & floristic composition of central dry zone forest emphasized on Powintaung Reserved Forest, Sagaing Division & Shinmataung Reserved Forest, Magway Division; ARC Project, Plant Species Diversity in Ywa-ngan Township, Southern Shan State; Universities Research Journal, Vol.2, 2009, Tree Species Diversity of Wet Dipterocarp Forest in the Taninthari Nature Reserved Forest, Taninthari Division; Dawei University Research Journal, Vol. II, and Forest structure, composition and diversity in Kyauk-shut area, Tanintharyi Nature Reserve (TNR); University of Yangon Research Journal Vol. 3, No.1.

Prof. Dr. Than Aung Htwe (Socio-economic Expert)

Transitional Registration No.: 10116

Dr. Than Aung Htwe is an expert of socio-economic impact and he has an extensive knowledge and experience on the social related topics. His strong research and academics derived from his graduate degrees of Master of Science, Faculty of Psychology, GadjahMada University, Yogyakarta, Indonesia, and Master of Arts, Department of Psychology, Dagon University, Myanmar.

He has some distinguished publications such as Measurement of Adolescent Ego Identity: Myanmar Translation of Ego Identity Process Questionnaire, Journal of the Myanmar Academy of Arts and Science. Vol.X.No.10, Adaptation of the Big Five Personality Measures and Examination of Their Factor Structure, Journal of the Myanmar Academy of Arts and Science.Vol.IX.No.9, Investigation of Personality Traits in Relation to Career Satisfaction and Life Satisfaction. Pathein University Research Journal. Vol.2. No.1, and A Role of Psychosocial Factors on Career Anchors of Some Myanmar Workers. Universities Research Journal.Vo.2.No. 9.

Dr. Kyaw Maung Maung Hein (HIA)

Transitional Registration No.: 10118

Dr. Kyaw Maung Maung Hein graduated from University of Medicine 2 Yangon in 2012 and completed postgraduate diploma in EIA/EMS offered from Yangon Technological University (YTU) in 2014. He has experience of conducting survey and action plan on community health based on the



title of ‘Smoking and community health’ as a survey leader during his house surgeon period (2011). He has shown his keen interest in environmental conservation and community health promoting, He wish to participate in environmental conservation including social affairs and community health with his medical knowledge.

As one aspect of ESIA, health impact assessment (HIA) is also important and he is the most suitable person in HIA and SIA process because he has knowledge on both EIA/EMS and medical field and he can synchronize environmental affairs and health. Furthermore, subject on “Preventive and Social Medicine” is one of his core specializations. He is currently acting as one of the core members of Myanmar Sustainable Development Engineering Service (MSDES).

Htet Akar Soe (GIS/RS)

Transitional Registration No.: 10113

He gained his B.Sc (Forestry) from the University of Forestry and Environmental Studies (Yezin) since 2013, and also is one of the member of Myanmar Forest Association (MFA). Moreover, he got post graduate diploma in RS & GIS from the University of Yangon. As his first experience, he served as a plantation officer in Euclyptus pure plantation of Great Wall Group. After that, he started working in Environmental field works for over one year, cooperated with a local fund, Eguard Environmental Services Co., Ltd. In there, He got many experiences related with public consultation, and relevant environmental sectors. And then, He joined at Myanmar Sustainable Development Engineering Services Co., Ltd (MSDES) as an assistant environmental consultant. Recently at MSDES, he focused on many research studies such as noise impact assessment, traffic study, air emission, aquatic ecosystem, and especially on remote sensing & GIS studies. He had registered as an RS & GIS consultant at Environmental Conservation Department (ECD). His published research term papers are Land Use Changes and Development of Myanmar and Geospatial spatial application for flood inundated mapping of Chindwin and Ayeyarwaddy River within dry zone area of central Myanmar.

Chit Hsu San (Legal Analyst)

Transitional Registration No.: 10117

Her academic degree is a Master of Law (LL.M) and Master of research (Mres) graduated from Yangon University. During her master study, she did comprehensive research on “Woman Rights in Myanmar”. Currently she is taking doctoral course in the University of Yangon. She started willingness to join environmental sector after completing Master degree, and worked as a legal consultant in Myanmar Sustainable Development Engineering Services Co., Ltd. In that organization,



legal analysis was her special interest or subject. During previous years, she had accumulated legal work experiences through ESIA process. Her significant project consultation or participation was legal requirement in the EIA study for Nam Paw Hydropower Project in Muse at Northern Shan State. Also, she got legal consultant registration from Environmental Conservation Department (ECD), (Registration. 10117).

Appendix 1

REPUBLIC OF THE UNION OF MYANMAR
Ministry of Natural Resources and Environmental Conservation
CERTIFICATE FOR TRANSITIONAL CONSULTANT REGISTRATION
 (ကြားကာလအကြောင်းလုပ်ကိုင်သူမှတ်ပုံတင်ခြင်းအထောက်အထားလက်မှတ်)

0032 Date **15 JUL 2017**

The Ministry of Natural Resources and Environmental Conservation, hereby, issues this certificate to the organization under Environmental Impact Assessment Procedure, Notification No. 616/2015.
 (ဝတ်စုံကျပ် ထိမှန်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမိန့်ကြော်ငြာစာအမှတ်၊ ၅၁၆/၂၀၁၅ အရ သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဝန်ကြီးဌာနသည် ဤအထောက်အထားလက်မှတ်ကို အဖွဲ့အစည်းအား ထုတ်ပေးလိုက်သည်။)

(a) Name of organization (အဖွဲ့အစည်းအမည်)	Myanmar Sustainable Development Engineering Services Co., Ltd.
(b) Name of the representative in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏အမည်)	U Aung Nanda
(c) Citizenship of the representative in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏နိုင်ငံသား)	Myanmar
(d) Identity Card /Passport Number of the representative person in the organization (အဖွဲ့အစည်းကိုယ်စားလှယ်၏ မှတ်ပုံတင်/ နိုင်ငံကူးလက်မှတ် အမှတ်)	12/ Sa Kha Na (Naing) 001504
(e) Address of organization (အကဲသွယ်ရန်လိပ်စာ)	No. 21 (I), U Kyaw Hla Street, 7 Mile, Mayangone Township, Yangon. nanda.msde@gmail.com , nanda@m-sde.com , 09 6160905, 09 799671216
(f) Type of Consultancy (အကြံပေးလုပ်ကိုင်မှုအမျိုးအစား)	Organization
(g) Duration of validity (သက်တမ်းကုန်ဆုံးရက်)	31 March 2018

Director General
 Environmental Conservation Department
 Ministry of Natural Resources and Environmental Conservation

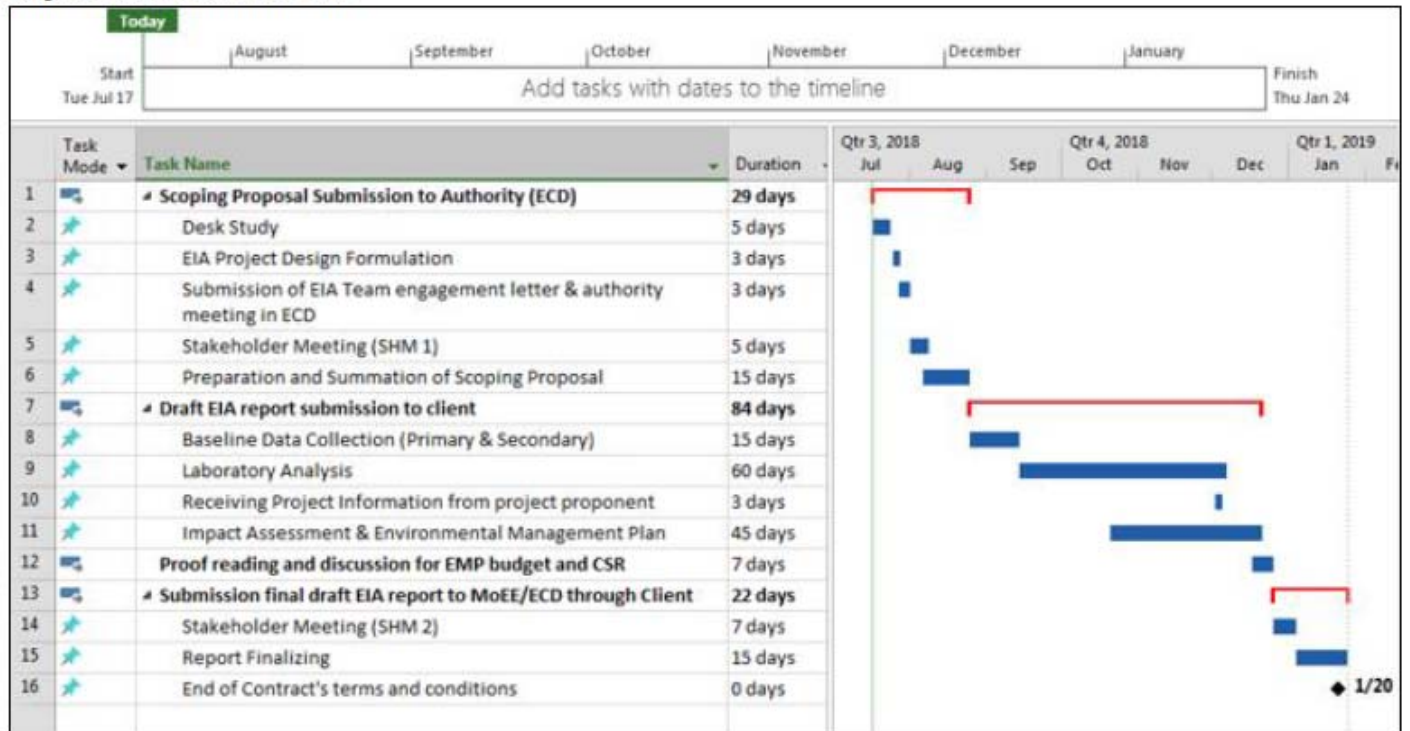
Areas of Expertise Permitted (ခွင့်ပြုသည့် ကျွမ်းကျင်မှုနယ်ပယ်များ)

1. Ecology and Biodiversity
2. Facilitation of Meeting
3. Land Use
4. Legal Analysis
5. Modeling for Water Quality
6. Noise and Vibration
7. Socio-Economy
8. Cultural Heritage
9. Environmental Science & Engineering Management
10. Mangrove Ecology



Appendix 2

Project Schedule for 145 MW





Appendix 3

Curriculum Vitae

- 1 **Proposed Position:** Environmental Science and Engineering Management Consultant
- 2 **Name of Firm:** Myanmar Sustainable Development Engineering Services Company Limited
- 3 **Name of Staff:** Mr. Aung Nanda
- 4 **Date of Birth:** 16.02.1973 **Nationality:** Myanmar
- 5 **Education:**

Institution (Date from - Date to)	Degree(s) or Diploma(s) obtained:
Yangon Technological University, Yangon, Myanmar, (1993 ~1998)	Bachelor of Engineering (Electrical Power)
SAITAMA University, Japan, 2002 - 2014	Master of Engineering (Environmental Science & Human Engineering)

- 6 **Membership of Professional Bodies:**
 - ❖ Certified Environmental Key Consultant (transitional registration No.: 10112)
 - ❖ Chairman of Myanmar Environmental Assessment Association
 - ❖ Member of Myanmar Engineering Society (MES)
 - ❖ Member of Myanmar National Committee for Large Dam (MNCOLD)
- 7 **Countries of Work Experience:**
 - ❖ Myanmar; Managing director, ESIA reviewer and ESIA specialist (2012~present)
 - ❖ Myanmar; Project Manager (2010~2012)
 - ❖ Japan; Engineer (2009) to supply product in green business

8 **Languages:**

Language	Reading	Speaking	Writing
Burmese	Mother Tongue		
English	Intermediate	Intermediate	Intermediate
Japan	Fair	Intermediate	Intermediate

- 9 **Employment Record:**

From: 2012 To: present
Employer: Myanmar Sustainable Development Engineering Services Co., Ltd.,
Positions held: Managing Director

From: 2016 To: Present
Employer: Ministry of Natural Resources and Environmental Conservation
(MONREC)
Positions held: External EIA Review Consultant for Energy Sector



From: 2015 To: 2016

Employer: Knowledge Space

Positions held: External EIA Review Consultant for MOECF

From: 2013 To: 2014

Employer: Ministry of Environmental Conservation and Forestry (MOECF)

Positions held: External EIA review Consultant for Let Pa Daung Copper Mining

From: 2013 To: 2013

Employer: Special Investigation Committee for Let Pa Daung Copper Mining

Positions held: Environmental Science and Engineering Consultant

From: 2010 To: Present

Employer: Myanmar Environmental Institute, Myanmar

Positions held: Lecturer & Founding Member

From: 2011 To: 2012

Employer: Freelance Environmental Consultant in ESIA study

Positions held: Key Consultant

From: 2010 To: 2012

Employer: Gunkul Engineering Supply Co., Ltd., Myanmar

Positions held: Project Manager

From: 2009 To: 2009

Employer: Sayama Seisakusho Co., Ltd., Japan

Positions held: Product Marketing Engineer

From: 2007 To: 2008

Employer: Department of Environmental Science & Technology, SAITAMA
University, Japan

Positions held: Research Assistant

From: 2006 To: 2007

Employer: United Nations University Institute of Advanced Studies, Yokohama,



Japan

Positions held: Assistant System Administrator

From: 2001 To: 2001

Employer: Gunkul Engineering Supply Co., Ltd., Myanmar

Positions held: Sales & Service Engineer

From: 1998 To: 2001

Employer: No.1 Elevators and Escalators Services, Myanmar

Positions held: Assistant Electrical Engineer

10 Detailed Tasks Assigned

Key qualifications:

- 7 years of research experience in aquatic ecology (River, Lake & Dam)
- 15 years of experience in Environmental studies
- Familiarity with IFC guidelines and ESIA review technology
- Depth understanding of Environmental Science and Engineering Management

11 Projects Undertaken that Best Illustrates Capability to Handle the Tasks Assigned

12

Name of assignment or project: Environmental and Social Impact Assessment (ESIA) for 18 MW Hydropower Project, Muse, Myanmar

Year: 2015 ~ present

Location: Muse Township, Northern Shan State, Myanmar

Client: Great Hor Kham Public Co Ltd.

Positions held: Team Leader/ Environmental and Social Safeguard

Main project features: Proposed project will fulfil the regional and national electrical requirement through connecting national grid. Feasibility study was conducted by Hunan Hydro & Power Design Institute, China and Myanmar Sustainable Development Engineering Services Company Limited (MSDES) took responsibility for Environmental, Socio-economic and Health Impact Assessment. Dam breaking analysis was being conducted by SYDRO, Germany. MSDES had collaboration with Sydro in the process of Flood hazard map development such as engagement in stakeholder engagement (local authority and heads of village) and providing local information.



Activities performed:

- ESIA project formulation and Design; screening potential impact from project activities
- Field survey and investigation in aquatic ecological study, taking leading role in Public Stakeholder Meeting to promote project transparency
- Input of local concerns and suggestion/comments into designed-ESIA framework
- Input of ESIA knowledge into the study of sector-wise social questionnaire survey and supporting field surveyor team to achieve fine resolution of result from SIA study
- Integration of results and findings from each study components; exchanges of key findings between study teams to promote the efficiency of study design
- Writing clear and comprehensive recommendation for decision making bodies (Authority)
- Environmental consideration to mitigate disaster and climate risk
- Providing environmental management solutions to mitigate adverse effect from Nam Paw dam installation; conducting research activities and collaboration with international institution
- Providing best technical solutions, Closely engagement with authorities for verification of requirements; acquisition of guidelines from concerned authority and presenting status of project and outcomes

Name of assignment or project: ESIA Review for A6 & AD7 Offshore Drilling Program

Year: November 2016~ May 2017

Location: Myanmar Marine near Rakkhine Coastal line

Client: Ministry of Natural Resources and Environmental Conservation (MONREC)

Positions held: Team leader of external ESIA Reviewer/ Environmental and Social Safeguard

Main project features: Ministry of Natural Resources and Environmental Conservation (MONREC) appointed Myanmar Sustainable Development Engineering Services Co., Ltd. (MSDES) to provide consultancy service to review two ESIA reports for deep water offshore drilling program of A6 (joint venture of MPRL E&P Pte Ltd. and Woodside Energy Myanmar Pte. Ltd. and Total E&P Myanmar) and AD-7 (joint venture of Woodside and POSCO Daewoo) in Myanmar sea near Rhakkhine coast.

Activities performed:

- Compliance check of proposed EIA reports with National environmental law, rules,



<p>EIA procedure, and IFC requirement Clarification and verification of technical matters,</p> <ul style="list-style-type: none"> • ESIA design adequacy check and identification of potential impacts on surrounding environment; request of supplementary information • Suggestion and recommendation for disaster and climate risk management • Suggestion and recommendation, especially for EMP section and emergency response plans (e.g., blowout prevention plan, oil spill response plan, waste management etc.) • Engagement in EIA review meetings in Nay Pyi Taw
<p>Name of assignment or project: Development of National Oil Spill Contingency Plan</p> <p>Year: 29th March 2017 ~ present</p> <p>Location: Yangon</p> <p>Client: Department of Marine Administration (DMA), Myanmar</p> <p>Positions held: Environmental Consultant</p> <p>Main project features: DMA is initiating to develop National Oil Spill Contingency Plan.</p> <p>Activities performed:</p> <ul style="list-style-type: none"> • Input of environmental and social consideration in development of National Oil Spill Contingency Plan • Study of Oil Spill Response Plan at private, municipal and national level in Norway (12.6.2017 ~ 17.6.2017) • Visit to stockpile depot in Horten and Ministry of Transport and Communications, Norway
<p>Name of assignment or project: Development of National Oil Spill Contingency Plan and Yangon River Oil Spill Contingency Plan (YOSCP)</p> <p>Year: April 2016 ~ 14.2.2017</p> <p>Location: Yangon</p> <p>Client: Department of Marine Administration (DMA), Myanmar</p> <p>Positions held: Environmental Consultant</p> <p>Main project features: DMA is initiating to develop National Oil Spill Contingency Plan and Yangon River Oil Spill Contingency Plan (YOSCP).</p> <p>Activities performed:</p> <ul style="list-style-type: none"> • Input of environmental and social consideration in development of Yangon River Oil Spill Contingency Plan • Development of base map (draft) and guideline (draft) for sensitivity map



- Participation in table –top exercise on Yangon River Oil Spill Contingency Plan (YOSCP) (4~5 May 2017)

Name of assignment or project: ESIA review for Development projects in Myanmar

Year: 2015 ~ 2016

Location: Yangon

Client: Knowledge Space

Positions held: ESIA reviewer

Main project features: Provision of consultancy service to review committee of MoECaF/MONREC to review ESIA reports for energy sector (i.e., Hydropower, coal fired power, natural gas, solar power, oil and gas exploration, refinery plant), industrial sector (i.e., beverage production, acid plant), mining sector (i.e., purification, gold mining) and plantation and oil mill.

Activities performed:

- Compliance check of proposed EIA reports with National environmental law, rules, EIA procedure, and IFC requirement; Clarification and verification of technical matters,
- ESIA design adequacy check and identification of potential impacts on surrounding environment; request of supplementary information
- Suggestion and recommendation, especially for EMP section and emergency response plans
- Engagement in EIA review meetings in Nay Pyi Taw

Name of assignment or project: EIA 500Ton/day Integrated Rice Complex Plant

Year: 2013~2015

Location: Twantay Townsihip, Yangon, Myanmar

Client: Myanmar Japan Rice Industry (JV of Myanmar Agribusiness Public Corporation and Mitsui & Co., Ltd.)

Positions held: Project Team Leader/consultants for water environment/ Environmental Management Plan

Main project features: Environmental and Social Impact Assessment for sustainable development of 500 Ton/Day Integrated Rice Complex Project and reuse of rice husk as biomass or renewable energy for electricity production.

Activities performed:



- ESIA project formulation and Design; screening potential impact from project activities
- Field survey and investigation for ambient water quality assessment, taking leading role in Public Stakeholder Meeting to promote project transparency
- Input of local concerns and suggestion/comments into designed-ESIA framework
- Input of ESIA knowledge into the study of environmental component and supporting field surveyor team to achieve fine resolution of result from SIA study
- Integration of results and findings from each study components; exchanges of key findings between study teams to promote the efficiency of study design
- Writing clear and comprehensive recommendation for decision making bodies (Authority)
- Providing environmental management solutions to mitigate adverse effect ; conducting research activities
- Providing best technical solutions, Closely engagement with authorities for verification of requirements; acquisition of guidelines from concerned authority and presenting status of project and outcomes
- Solid waste management (Rice Husk Ash)
- Traffic volume survey
- Changes in Hydrological regime and flood risk
- Environmental consideration to mitigate disaster and climate risk

Name of assignment or project: Environmental and Social Impact Assessment (ESIA) for 50 MW Gas Engine Power Plant, Yangon

Year: 2013

Location: Ywama, Insein Townshipp, Yangon, Myanmar

Client: UPP Power (Myanmar)

Positions held: Project Team Leader/ Environmental and Social Safeguard

Main project features: Development of proposed gas engine power plant (50 MW) is private sector participation in Myanmar Electric Power Industry; Myan Shwe Pyi Limited contracted as turnkey contractor and UPP Power (Myanmar) Limited contracted as a project developer. Predicted power demand in year 2013-2014 is 800MW~900 MW. Although there are existing Gas Turbine Power plants, within and in the vicinity of Yangon, such as Ywama, Taketa, Ahlone and Hlawga, there has been inadequate supply of electricity to suffice the peak load demand especially in the drought season.



Fast track solution and low carbon electricity generation like development of Gas Engine Power Plant (GEPP) is considered for optimization of power supply and gap reduction between power demand and supply in order to alleviate power shortage in Yangon District.

Activities performed:

- ESIA project formulation and Design; screening potential impact from project activities
- taking leading role in Public Stakeholder Meeting to promote project transparency
- Input of local concerns and suggestion/comments into designed-ESIA framework
- Input of ESIA knowledge into the study of environmental component
- Integration of results and findings from each study components; exchanges of key findings between study teams to promote the efficiency of study design
- Writing clear and comprehensive recommendation for decision making bodies (Authority)
- Conducting research activities
- Providing best technical solutions, Closely engagement with authorities for verification of requirements; acquisition of guidelines from concerned authority and presenting status of project and outcomes
- Solid waste management

Name of assignment or project: Review on ESIA Letpadaung Copper Mining

Year: 2013~ 2014

Location: Monywa, Sagaing Myanmar

Client: : Ministry of Environmental Conservation and Forestry (MoECaF)

Positions held: External EIA reviewer

Main project features: Letpadaung Copper Mine is a national level Copper Mining Project and regarded as second biggest copper ore mining in Asia. This project is under the joint venture of Myanmar Wanbao Mining Copper Ltd., Ministry of Mining (Myanmar) and UMEHL. ESIA report for Letpadaung Copper Mining was prepared by *Knight Piésold Consulting Firm* and MoECaF assigned external consultants to strengthen the technical knowledge in review process of proposed EIA report.

Activities performed:

- Compliance check of proposed EIA reports with National environmental law, rules, and IFC requirement



<ul style="list-style-type: none"> • ESIA design adequacy check and identification of potential impacts on surrounding environment; request of supplementary information • Engagement in EIA review meetings (20 times) in Nay Pyi Taw • Clarification and verification of technical matters, especially in design of waste facilities, stockpile, water use, waste water treatment and field investigation result • Earthquake risk and natural flood risk assessment • Suggestion and recommendation, especially for EMP section and emergency response plans including disaster and climate risk management
<p>Name of assignment or project: Rapid assessment of Letpadaung Copper Mine; Investigation on environmental performance and compliance with international standards based on Environmental Science and Engineering point of view</p> <p>Year: December 2012~ February 2013</p> <p>Location: Monywa, Sagaing Myanmar</p> <p>Client: Special Investigation Committee</p> <p>Positions held: Key consultant for Environmental Science and Engineering</p> <p>Main project features: Letpadaung Copper Mine is a national level Copper Mining Project and regarded as second biggest copper ore mining in Asia. This project is under the joint venture of Myanmar Wanbao Mining Copper Ltd., Ministry of Mining (Myanmar) and UMEHL. Due to the project requirement, special investigation committed was set up and rapid assessment report was urgently required for decision making process. Technical report was published in National News Papers.</p> <p>Activities performed:</p> <ul style="list-style-type: none"> • Field investigation and environmental auditing • Identification of environmental problem associated with project design; risk assessment on mine design • Identification of possible leakage of pregnant solution • Identification of flood risk exposure to waste water pond • Provision of international practice into existing management plan • Environmental consideration in disaster and climate risk management • Reporting findings, recommendation and suggestion to Special investigation committee
<p>Name of assignment or project: Baseline study for the Development of 500MW CCGT Gas Turbine (Myanmar)</p> <p>Year: 2011</p> <p>Location: Taketa, Yangon, Myanmar</p>



<p>Client: REM</p> <p>Positions held: Consultant for water environment</p> <p>Main project features: Participation as freelance environmentalist</p> <p>Activities performed: Field survey and report writing for water quality</p>
<p>Name of assignment or project: Initial Environmental Evaluation for Moehti Gold Mining)</p> <p>Year: 2012</p> <p>Location: Yamethin, Myanmar</p> <p>Client: REM</p> <p>Positions held: Consultant for waste management</p> <p>Main project features: Participation as freelance environmentalist.</p> <p>Activities performed: Field survey and report writing for waste management</p>
<p>Name of assignment or project: Environmental study for Power Transmission Line (EIA PTL)</p> <p>Year: 2011</p> <p>Location: Baluchaung-Shwe Myo & Upper Ye Ywa-Shwe Saryan, Myanmar</p> <p>Client: Ministry of Electric Power (MOEP)</p> <p>Positions held: Project Manager of Gunkul Engineering Supply Co., Ltd. /Consultant</p> <p>Main project features: Ministry of Electric Power (MOEP) outsourced ESIA consultancy service to Gunkul Engineering Supply Co., Ltd for the construction of subject transmission lines. Resource and Environment Myanmar (REM) was subcontractor..</p> <p>Activities performed:</p> <ul style="list-style-type: none"> • Project Management • Field survey and report writing for waste management & identification of impacts induced by engineering process
<p>Name of assignment or project: , Hlaing Thet 33:11 kV substation</p> <p>Year: 2010~2012</p> <p>Location: Nay Pyi Taw and Yangon, Myanmar</p> <p>Client:</p> <p>Positions held: Project Manager of Zeya & Associates (formerly known as Gunkul Engineering Supply Co., Ltd.)</p> <p>Main project features: .</p> <p>Activities performed:</p>



<ul style="list-style-type: none"> • Engineering, Procurement and Construction of 33:11 kV substation, Hlaing Thet, Meikhtilar • Supply of electrical equipment and oil and gas products; engineering assistance in trouble shooting; market development and extension; supervision sales team • Tendering process such as outsourcing, technical clarification, documentation, site visit
<p>Name of assignment or project: Environmental assessment by using bio-indicator (aquatic insect) under pre and post Takizawa dam</p> <p>Year: 2005 to 2009</p> <p>Location: Chichibu City, JAPAN</p> <p>Client:</p> <p>Positions held: PhD candidate</p> <p>Main project features: This research was performed for partial fulfilment of PhD course. (Note: PhD was not completed yet.)</p> <p>Activities performed:</p> <ul style="list-style-type: none"> • Study of aquatic insect responses to the changes of food-sources under pre and post dam installation • Field sampling, Identification of aquatic insect and their functional feeding group • Lab measurement for Chlorophyll a, water nutrient, Food sources for aquatic ecosystem (CPOM and FPOM ,) • Data analysis using Canoco vesion (4.5)
<p>Name of assignment or project: Research assistant program for ecological lab, Saitama University</p> <p>Year: 2008</p> <p>Location: Saitama University , Japan</p> <p>Client:</p> <p>Positions held: Research Assistant</p> <p>Main project features: This program was to provide research assistance under supervision of Assoc. Professor.</p> <p>Activities performed:</p> <ul style="list-style-type: none"> • Water quality analysis; identification of aquatic insects, data processing and analysis • Phytoplankton distribution study in Okutama dam



Name of assignment or project: Influences of water chemistry and stream biota on the decomposition experiments of *Zelkova serrata* leaves and *Prunus Lannesiana* leaves in Yanase River, Iruma City

Year: 2004 to 2004

Location: Japan

Client:

Positions held: Researcher

Main project features: This research was performed as partial fulfilment of Master degree course.

Activities performed:

- Study on influences of water chemistry and stream biota on the decomposition experiments of *Zelkova serrata* leaves and *Prunus Lannesiana* leaves in Yanase River, Iruma City, JAPAN.
- Impact of stream geomorphic units on leaves litter (CPOM) retention; Application of integrated surveying methodologies (i.e., stream-geomorphology mapping, map producing, map-digitizing, map updating) to elucidate the characteristics of stream geomorphic units and its enhancement on leaves litter (CPOM) distribution.

13 Publications:

- 1) **Nanda A.**, T. Asaeda, T. Fujino & T. Nakajima, 2009. Aggregation of lepidostomatidae in small mesh size litter-bags: implication to the leaf litter decomposition process. Journal of Wetlands Ecological Management 17-4: 417-421.
- 2) Takashi Nakajima, Takashi Asaeda, Takeshi Fujino & **Aung Nanda**, 2006. Leaf Litter Decomposition in Aquatic and Terrestrial Realms of a Second-Order Forested Stream System. Freshwater Ecology 21-2: 259-263.
- 3) Takashi Nakajima, Takashi Asaeda, Takeshi Fujino & **Aung Nanda**, 2006. Coarse particulate organic matter distribution in the pools and riffles of a second-order stream. Hydrobiologia 559: 275-283.
- 4) T. Fujino, H. Wityi & A. Nanda 2012 Aquatic Invertebrate Monitoring at the Least Developed Areas in Myanmar - effect of shifting cultivation on water quality, ISRS 2012 conference
- 5) Takashi NAKAJIMA, Takashi ASAEDA, Takeshi FUJINO & Aung NANDA, 2007. Leaf pack distribution and accumulation mechanism in a second-order stream. Ecol. Civil Eng 10(2): 131-139
- 6) NANDA, Aung, Takashi FUJINO, Takeshi ASAEDA, Yoichi TAKAHASHI, 2006. High population of invertebrate in upstream. 日本陸水学会,(1B03).
- 7) NANDA, Aung, Takashi FUJINO, Takeshi ASAEDA, Yoichi TAKAHASHI, 2006. Proceedings of the International Conference on Ecological Restoration in East Asia 2006, Osaka. Poster session. Macro-invertebrate community composition in upstream and downstream of Takizawa Dam.



Proceedings of the International Conference on Ecological Restoration in East Asia 2006, Osaka. (Poster session.)

- 8) T.Fujino, T.Asaeda, T.Nakajima, Aung Nanda, 2005. Organic matter retention and its distribution in low discharge stream. Poster presentation of ASLO 2005 Summer Meeting in Santiago de Compostela, Spain, 19-24. (Poster session.)
- 9) T.Fujino, T.Nakajima, **Aung Nanda**, T. Asaeda, 2003. Leaf Litter breakdown in upstream ecosystems. Proceeding of the Seminar on Civil and Environmental Engineering in **Bangkok, Thailand**, 18-19.
- 10) Nanda, Aung, Takashi Nakajima, Takeshi Fujino, Takashi Asaeda, 2003. Leaf litter decomposition by mesh bag method and its problem. 68th Japanese Limnology Symposium in Okayama, Pg.174. (Poster session.)
- 11) Win Maung, Soe Thura Tun, Zaw Naing Oo and Aung Nanda (2011) Physical and Biological Characteristics of Kandawgyi and Inya Lakes in Yangon Mega-City
- 12) Nanda, A., et. al, "Initial report on rapid assessment of Yangon Air Quality affected by fly-ash-particulate matter (PM₁₀ and PM_{2.5}) in smoke dispersion from fire of Htein Pin waste dumpsite", Project No.: MIAA-01/0518_Htein Pin Fire, (2018).

14 Certification:

- a. ABS ISO 14001:2015 EMS Internal Auditor Certificate
- b. "Environmental Safeguard Policy Application "arranged by MONREC, ADB, WB (March 28-29, 2017)
- c. "Training on Air Quality Management" arranged by YCDC, AIT (Thailand) & EQM (12-13 February 2017)
- d. Dam Safety arranged by Irrigation Department, Myanmar (2016)
- e. Introduction for Air Quality Study arranged by EQM
- f. Professional Development Program in Myanmar Engineering Council (15 hours)
- g. Introduction for ISO: 14001
- h. ISO: 9001 Internal Auditor Course

I, the undersigned, certify that to the best of my knowledge and believe, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Date: 15 December 2017

Full name of authorized representative: Aung Nanda





Curriculum Vitae

- 1 **Proposed Position:** Biodiversity Consultant
2 **Name of Firm:** Myanmar Sustainable Development Engineering Services Company Limited
3 **Name of Staff:** Prof. Dr. Myint Aung
4 **Date of Birth:** 15.06.1967 **Nationality:** Myanmar
5 **Education:**

Institution (Date from - Date to)	Degree(s) or Diploma(s) obtained:
University of Yangon, 1991	B.A (Honours) (Botany)
University of Yangon, 1995	MSc. (Tissue Culture)
Yokohama National University, Japan, 2004	Ph.D (Environment and Natural Science)

- 6 **Membership of Professional Bodies:**
a. Certified Biodiversity Key Consultant (transitional registration No.: 10115)

- 7 **Countries of Work Experience:**
Myanmar, Japan

- 8 **Languages:**

Language	Reading	Speaking	Writing
Burmese	Mother Tongue		
English	Excellent	Excellent	Excellent
Japan	Intermediate	Intermediate	Intermediate

- 9 **Employment Record:**

From: 1994 To: 2001

Employer: University of Yangon

Positions held: Demonstrator

From: 2001 To: 2004

Employer: University of Yangon

Positions held: Assistant Lecturer

From: 2004 To: 2009

Employer: University of Yangon and Dawei University

Positions held: Lecturer

From: 2009 To: 2015

Employer: Dawei University and University of Yangon

Positions held: Associate Professor

From: 2015 To: till now

Employer: University of Myitkyina



Positions held: Professor

10 Detailed Tasks Assigned

Key qualifications:

- PhD, Vegetation Science

11	Projects Undertaken that Best Illustrates Capability to Handle the Tasks Assigned
12	<p>Name of assignment or project: ESIA Review for A6 & AD7 Offshore Drilling Program Year: 2016~ 24.11.2017 Location: Myanmar Marine near Rakkhine Coastal line Client: Ministry of Natural Resources and Environmental Conservation (MONREC) Positions held: Mangrove specialist Main project features: Ministry of Natural Resources and Environmental Conservation (MONREC) appointed Myanmar Sustainable Development Engineering Services Co., Ltd. (MSDES) to provide consultancy service to review two ESIA reports for deep water offshore drilling program of A6 (joint venture of MPRL E&P Pte Ltd. and Woodside Energy Myanmar Pte. Ltd. and Total E&P Myanmar) and AD-7 (joint venture of Woodside and POSCO Daewoo) in Myanmar sea near Rhakkhine coast. Activities performed:</p> <ul style="list-style-type: none"> • Compliance check of proposed EIA reports with National environmental law, rules, EIA procedure, and IFC requirement Clarification and verification of technical matters, • ESIA design adequacy check and identification of potential impacts on surrounding environment; request of supplementary information • Suggestion and recommendation for coastal biodiversity study <p>Name of assignment or project: Environmental and Social Impact Assessment (ESIA) for 18 MW Hydropower Project, Year: 2015 to ongoing Location: Muse, Shan state, Myanmar Client: Great Hor Kham Co Ltd. Positions held: Biodiversity Consultant Main project features: ESIA Activities performed:</p> <ul style="list-style-type: none"> • Engagement in ESIA project formulation and design • Biodiversity research design, field survey and report writing including mitigation measure <p>Name of assignment or project: Environmental and Social Impact Assessment (ESIA) for 500 Ton/Day Integrated Rice Complex Project Year: 2014 to 2015 Location: Myanmar Client: Myanmar Agribusiness Public Corporation Positions held: Biodiversity Consultant Main project features: EIA Activities performed:</p> <ul style="list-style-type: none"> • Engagement in ESIA project formulation and design • Biodiversity research design, field survey and report writing including mitigation measure

13 Publications and Research Activities:

- 1) Forest Dynamics Research of Endemic Species in the Tanintharyi Nature Reserve (2012)



- 2) Phytosociological study for conservation and restoration of mangrove vegetation in the the Ayeyarwady Delta, Myanmar (2004)
- 3) Effect of growth factors on growth of *Dendrobium* Madam Udom Sri (1995)
- 4) Altitudinal Effect on Species Diversity and Floristic Composition of Evergreen Forest in Kachin State (Supervisor)
- 5) Geochemical, Hydrological and Geobotanical Investigation in Mingon Area, Yangon Region and Meyon Area, Mon State (Supervisor)
- 6) Economically Important Pulses in Kanma and Myitchay Areas, Western Pakokku Township (Member)
- 7) *In vitro* Propagation and In vivo Blooming of *Dendrobium moschatum* Swartz. (Member)
- 8) Economically Important Pulses in Kanma and Myitchay Areas, Western Pakokku Township (Member)
- 9) Effects of Different Media and Growth Regulators on In vitro Culture and In vivo Blooming of *Rhynchostylis retusa* (L.) Bl. (Member)
- 10) Flower Production of *Bulbophyllum auricomum* L. Through the Application of Plant Growth Regulators and Its Micropropagation (Member)
- 11) Phytosociological study of Dry Zone Forest in Shinmataung Reserved Forest, Yesagyo Township, Magway Region (Supervisor)
- 12) Phytosociological Study of Dry Zone Forest in Powin Taung Reserved Forest, Monywa District, Sagaing Region (Supervisor)
- 13) Wastewater Management of the Biopharmaceutical Plant in Hlegu Township, Yangon Region (External examiner)
- 14) Species composition and structure of mangrove community along the U-To tidal creek in Chaung Tha (External examiner)
- 15) Assessment of plant species diversity and plant community structure in Pauk Township, Magway Region (External examiner)
- 16) Physiological Study and Assessment of Bio-ethanol Productivity of *Sorghum bicolor* (L.) Moench (Sweet Sorghum) (Member)
- 17) Assessment of Water Quality in Inle Lake, Southern Shan State (Supervisor)
- 18) Assessment of plant species diversity and plant community structure in Ywe-ngan Township, Southern Shan State (Supervisor)
- 19) Ecology of mangrove forest in the coastal zone of Mon State with special reference to the family Sonneratiaceae (External examiner)



- 20) A phytosociological study of vegetation on Kelatha Mountain, Bilin Township, Mon State (Supervisor)
- 21) Ggeobotanic study on plant community and accumulation of trace elements in plants and soils with special reference to Khwayaiktaung, Heho, Southern Shan State (Supervisor)
- 22) Ggeobotanical analysis on the associated plant species and relationship of plants and rocks and mineralization in Taungni Taung Area, Kyaukpadaung Township, Mandalay Division (Supervisor)
- 23) The study on the protease enzymes extracted from pineapple palnts (Co-supervisor)
- 24) Fern flora and communities in the Yangon Division (Co-supervisor)
- 25) Ggeobotanical analysis on the associated plant species and relationship to rocks and mineralization at Kyaukmyet area, Salingyi Township, Sagaing Division (Supervisor)
- 26) A study on ethnomedicinal plants used by Kayin tribes in Thandaungyi Township (External examiner)
- 27) Diversity of plant species in Letpadaung hills and their socio-economic status in five selected villages located in the vicinities (Co-supervisor)
- 28) Phytosociological study of mangrove vegetation in the Laung-lone Township, Tanintharyi Region (M.Res., Supervisor)
- 29) Mangrove species composition and floristic diversity in the Pantin-In Area, Laung-lone Township, Tanintharyi Region (M.Sc., Supervisor)
- 30) Planting Techniques of *Anacardium occidentale* L. (Cashew nut) and their Processing from Raw to Finished Products in the Laung-Lone Township, Dawei (M.Sc., Supervisor)
- 31) The study of Rubber *Hevea brasiliensis* Plantation and Processing from Raw to Finished Products (M.Res., Supervisor)
- 32) Socioeconomic development of "thin" utilization from tradition to modernity in Pantanaw Township, Ayeyarwady Division (M.Res., Supervisor)
- 33) Ecological Study in Hlawga Reservoir Reserve Area, Mingalardon Township, Yangon (M.Res., Supervisor)
- 34) The study of plant species diversity in Ban-bwe-gon Reservoir Reserve Forest, Kyauk-tan Township (M.Res., Supervisor)
- 35) The study of land degradation and conservation of agricultural land in Magway Township, Magway Division (M.Res., Supervisor)
- 36) The Study of Mangrove Soil and Growth Performance of Cultivated Mangrove Species in the Pyindaye Reserve Forest Area, Bogalay Township, Ayeyarwady Delta (M.Res., Supervisor)



- 37) Reforestation Management and Socioeconomic Condition of Taungya Cultivators in Selected Area of Pyinmana Township (M.Res., Internal examiner)
- 38) Study on Economic Important Plants of Taw-gyi-dan Agricultural Camp, Twante Township, Yangon Division (M.Res., Internal examiner)
- 39) Seasonal variation of plants in Ngwe-Yar Taung, Mingalardon Township (M.Res., Internal examiner)
- 40) A study on Waste Disposal System in Yangon University (M.Res., Internal examiner)
- 41) Phytosociological study of mangrove vegetation in Byone-hmwe Island, Ayeyarwady Delta, Myanmar Relationship between floristic composition and Habitat-; Mangrove Science, Japan. Vol. 3, 7-23, 04
- 42) Ecological study of mangrove vegetation in the Ayeyarwady Delta, Myanmar; ITTO, online article, 2004 (Japan)
- 43) Plant Species Diversity in Ywa-ngan Township, Southern Shan State; Universities Research Journal, Vol.2, 2009
- 44) Tree Species Diversity of Wet Dipterocarp Forest in the Taninthari Nature Reserved Forest, Taninthari Division; Dawei University Research Journal, Vol. II
- 45) Forest structure, composition and diversity in Kyauk-shut area, Tanintharyi Nature Reserve (TNR); University of Yangon, Research Journal Vol. 3, No.1

14 Certification:

I, the undersigned, certify that to the best of my knowledge and believe, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Date: 12 December 2017

Full name of authorized representative: Dr. Myint Aung



Curriculum Vitae

- 1 **Proposed Position:** SIA expert
2 **Name of Firm:** Myanmar Sustainable Development Engineering Services Company Limited
3 **Name of Staff:** Prof. Dr. Than Aung Htwe
4 **Date of Birth:** 26.06.1970 **Nationality:** Myanmar
5 **Education:**

Institution (Date from - Date to)	Degree(s) or Diploma(s) obtained:
University of Yangon, Yangon 1991 - 1995	Bachelor of Arts (Psychology)
University of Dagon, Yangon 2000 - 2001	Master of Arts (Psychology)
Gadjah Mada University, Yogyakarta, Indonesia 2001 - 2004	Master of Science (Psychology)
University of Yangon, Yangon 2008 - 2013	PhD (Psychology)

- 6 **Membership of Professional Bodies:**
a. Certified SIA Key Consultant (transitional registration No.: 10116)

- 7 **Countries of Work Experience:**
Myanmar

- 8 **Languages:**

Language	Reading	Speaking	Writing
Burmese	Mother Tongue		
English	Excellent	Excellent	Excellent

- 9 **Employment Record:**
- From: 2016 To: Ongoing
Employer: Department of Psychology, Maw La Myine University
Position held: Professor
- From: 2015 To: 2016
Employer: Department of Psychology, Taunggyi University
Position held: Associate Professor
- From: 2012 To: 2015
Employer: Department of Psychology, Dagon University
Positions held: Lecturer
- From: 2011 To: 2012
Employer: Department of Psychology, Patheingyi University
Positions held: Lecturer



From: 2010 To: 2011
Employer: Department of Psychology, Patheingyi University
Positions held: Assistant Lecturer
From: 2008 To: 2010
Employer: Department of Psychology, Dagon University
Positions held: Assistant Lecturer

From: 2006 To: 2008
Employer: Department of Psychology, Dawei University
Positions held: Assistant Lecturer

From: 1998 To: 2006
Employer: Department of Psychology, Dagon University
Positions held: Tutor

10 Detailed Tasks Assigned

Key qualifications:

- Social impact analysis
- Social management planning

11	Projects Undertaken that Best Illustrates Capability to Handle the Tasks Assigned
12	<p>Name of assignment or project: ESIA Review for A6 & AD7 Offshore Drilling Program</p> <p>Year: 2016~ 24.11.2017</p> <p>Location: Myanmar Marine near Rakhine Coastal line</p> <p>Client: Ministry of Natural Resources and Environmental Conservation (MONREC)</p> <p>Positions held: Social Safeguard</p> <p>Main project features: Ministry of Natural Resources and Environmental Conservation (MONREC) appointed Myanmar Sustainable Development Engineering Services Co., Ltd. (MSDES) to provide consultancy service to review two ESIA reports for deep water offshore drilling program of A6 (joint venture of MPRL E&P Pte Ltd. and Woodside Energy Myanmar Pte. Ltd. and Total E&P Myanmar) and AD-7 (joint venture of Woodside and POSCO Daewoo) in Myanmar sea near Rakhine coast.</p> <p>Activities performed:</p> <ul style="list-style-type: none"> • Compliance check of proposed EIA reports with National environmental law, rules, EIA procedure, and IFC requirement Clarification and verification of technical matters, • ESIA design adequacy check and identification of potential impacts on surrounding environment; request of supplementary information • Suggestion and recommendation for Social study



<p>Name of assignment or project: Environmental and Social Impact Assessment (ESIA) for 18 MW Hydropower Project, Muse, Myanmar</p> <p>Year: 2015 to ongoing</p> <p>Location: Myanmar</p> <p>Client: Great Hor Kham Public Co Ltd.</p> <p>Positions held: Socio-economic Impact Specialist</p> <p>Main project features: social impact analysis and social management planning</p> <p>Activities performed:</p> <ul style="list-style-type: none"> ▪ Designing SIA study ▪ Instrumentation for collecting socio-economic baseline data ▪ Managing field social survey ▪ Data management and analysis ▪ Reporting socio-economic baseline information of the project area ▪ Reporting public consultation and participation results ▪ Assessing potential project social impact and proposing mitigation and enhancement measures ▪ Preparing social management and monitoring plan ▪ Preparing CSR program recommendations
<p>Name of assignment or project: Environmental and Social Impact Assessment (ESIA) for 500 Ton/Day Integrated Rice Complex Project</p> <p>Year: 2014 to 2015</p> <p>Location: Myanmar</p> <p>Client: Myanmar Agribusiness Public Corporation</p> <p>Positions held: Socio-economic Impact Specialist</p> <p>Main project features: social impact analysis and social management planning</p> <p>Activities performed:</p> <ul style="list-style-type: none"> ▪ Designing SIA study ▪ Instrumentation for collecting socio-economic baseline data ▪ Managing field social survey ▪ Data management and analysis ▪ Reporting socio-economic baseline information of the project area ▪ Reporting public consultation and participation results ▪ Assessing potential project social impact and proposing mitigation and enhancement measures ▪ Preparing social management and monitoring plan

13 Publications:

Investigating Research Self-efficacy in Relation to Research Training Environment and Interest in Research. (In Press). *Taunggyi University Research Journal*, Vol. 7. No.1.

Investigation of Organizational Justice and Its Correlates among Some Myanmar Basic Education School Teachers. (2014). *Journal of Myanmar Academy of Arts and Science*, Vol. XII. No. 10.

Testing the Dimensionality of Global Self-Esteem and Evaluating Negative-Item Effect. (2013). *Journal of Myanmar Academy of Arts and Sciences*, Vol. XI. No.10.

Investigation of Item Wording Effect in the Myanmar Version of Rosenberg Self-Esteem Scale. (2013). *Universities Research Journal*, Vol.5.No.9.

Consequences of Organizational Justice among Myanmar Basic Education School Teachers. (2012). *Patheingyi University Research Journal*, Vol.4.No.1.

Measurement of Adolescent Ego Identity: Myanmar Translation of Ego Identity Process Questionnaire. (2013). *Journal of the Myanmar Academy of Arts and Science*. Vol. X.No.8.



Adaptation of the Big Five Personality Measures and Examination of Their Factor Structure. (2011).
Journal of the Myanmar Academy of Arts and Science. Vol.IX.No.8.
Investigation of Personality Traits in Relation to Career Satisfaction and Life Satisfaction. (2011).
Patheingyi University Research Journal Vol.2.No.1.
A Role of Psychosocial Factors on Career Anchors of Some Myanmar Workers. (2009). *University
Research Journal*.Vol.2.No.9.

14 Certification:

I, the undersigned, certify that to the best of my knowledge and believe, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Date: 12.12.2017

Full name of authorized representative: Dr. Than Aung Htwe



Curriculum Vitae

- 1 **Proposed Position:** Community and Occupational Health Consultant
2 **Name of Firm:** Myanmar Sustainable Development Engineering Services Company Limited
3 **Name of Staff:** Dr. Kyaw Maung Maung Hein
4 **Date of Birth:** 3rd July, 1989 **Nationality:** Myanmar
5 **Education:**

Institution (Date from - Date to)	Degree(s) or Diploma(s) obtained:
University of Medicine 2 (2005 – 2011)	M.B.,B.S (Ygn)
Yangon Technological University (2013 – 2014)	Dip EIA/EMS (Diploma in Environmental Impact Assessment and Environmental Management System)
Yangon University (2014 – 2015)	DBL (Diploma in Business Law)
Yangon University (2015 – 2016)	DIL (Diploma in International Law)

- 6 **Membership of Professional Bodies:**
❖ Life member of Myanmar Medical Association
❖ Certified HIA Consultant (transitional registration No.: 10118)

- 7 **Countries of Work Experience:** Myanmar

- 8 **Languages:**

Language	Reading	Speaking	Writing
Burmese	Mother Tongue		
English	Intermediate	Intermediate	Intermediate

- 9 **Employment Record:**
From: May 2016 To: July 2017
Employer: Myanmar Sustainable Development Engineering Services Co., Ltd.
Positions held: Assistant Project Manager/ Assistant Environmental Consultant

From: April 2014 To: April 2016
Employer: Myanmar Sustainable Development Engineering Services Co., Ltd.
Positions held: Assistant Project Manager/ Apprentice Environmental Consultant

- 10 **Detailed Tasks Assigned**

- Key qualifications:
- Community and Occupational Health
 - Project management



11 Projects Undertaken that Best Illustrates Capability to Handle the Tasks Assigned

12

Name of assignment or project: 20MW Hydropower Project, Muse Township

Year: 2015 to ongoing

Location: Myanmar

Client: Great Horkham Public Co., Ltd.

Positions held: Assistant Project Manager/ Assistant Environmental Consultant

Main project features: Hydropower

Activities performed:

Assist in project management

Health Impact Assessment

Sampling (Collection, Processing for analysis)

Report compilation

Name of assignment or project: Integrated Rice Complex Project (IRCP), Twantay Township

Year: 2013 to 2016

Location: Myanmar

Client: Myanmar Japan Rice Industry (MJRI)

Positions held: Assistant Project Manager/ Assistant Environmental Consultant

Main project features: Rice Mill Complex

Activities performed:

Assist in project management (stakeholder meeting)

Report compilation

13 Publications: Nil

14 Certification:

I, the undersigned, certify that to the best of my knowledge and believe, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Date: 12.12. 2017

Full name of authorized representative: Dr. Kyaw Maung Maung Hein



Curriculum Vitae

- 1 **Proposed Position:** GIS/RS Consultant
2 **Name of Firm:** Myanmar Sustainable Development Engineering Services Company Limited
3 **Name of Staff:** Htet Arkar Soe
4 **Date of Birth:** 22.5.1993 **Nationality:** Myanmar
5 **Education:** B. Sc (forestry)

Institution (Date from - Date to)	Degree(s) or Diploma(s) obtained:
2008 - 2013	B. Sc (Forestry)
2016 - 2017	RS & GIS (Diploma)

6 **Membership of Professional Bodies:**

- ❖ Myanmar Forest Association (MFA)
- ❖ Certified GIS/RS Consultant (transitional registration No.: 10113)

7 **Countries of Work Experience:** Myanmar (3.5 years)

8 **Languages:**

Language	Reading	Speaking	Writing
Burmese	Mother Tongue		
English	Good	Moderate	Good

9. **Employment Record:**

From: [2013] To: [2013]
Employer: Great Wall Group
Positions held: Plantation Officer

From: [2013] To: [2015]
Employer: [E guard Environmental Services Co., Ltd]
Positions held: Research Assistant

From: [2016] To: [2017]
Employer: Myanmar Sustainable Development Engineering Services Co., Ltd
Positions held: Apprentice environmental consultant & Project Coordinator

10 **Detailed Tasks Assigned**

Key qualifications:

- Remote sensing S & GIS (ECD consultant registration number – 10113)
- Noise Impact assessment



11	Projects Undertaken that Best Illustrates Capability to Handle the Tasks Assigned
	<p>Name of assignment or project: Dry Zone Water Supply Project (Phase 2)</p> <p>Year: [2013] to [2014]</p> <p>Location: [Myanmar]</p> <p>Client: Japan International cooperation agency (JICA)</p> <p>Positions held: Social survey leader and report assistant</p> <p>Main project features: JICA study team cooperated with government organization for water supply in Dry zone, Myanmar started public consultation and socio economic study on ground of dry zone regions. For this project, local environmental assessment team, E guard environmental Co., Ltd played as role of socio economic surveying in which pre study cases operated before supplement.</p> <p>Activities performed:</p> <ul style="list-style-type: none"> - Public consultation and stakeholder meeting in three regions. - Assist to Data Analysis. - Social Data Acquisition - Project coordinating
	<p>Name of assignment or project: Environmental and Social Impact Assessment (ESIA) for Nam Paw Hydropower Project, Muse, Myanmar</p> <p>Year: 2015 to ongoing</p> <p>Location: Myanmar</p> <p>Client: Great Hor Kham Co Ltd.</p> <p>Positions held: Apprentice environmental consultant and Project Coordinator</p> <p>Main project features:</p> <p>Nam Paw Hydropower Project developed by Great Hor Kham Public Company Limited at Muse Township, Myanmar will fulfil the regional electrical requirement through connecting national grid. Feasibility study was conducted by Hunan Hydro & Power Design Institute, China and Myanmar Sustainable Development Engineering Services Company Limited took responsibility for Environmental, Socio-economic and Health Impact Assessment. Dam breaking analysis is being conducted by SYDRO, Germany.</p> <p>Activities performed:</p> <p>To understand existing baseline noise and traffic conditions of Muse City possibly affected project activities and status of vehicles were collected and surveyed vehicles for existing primary data. Using RS & GIS, spatial analysis on traffic condition was studied to choose effective alternative roads to project construction site based on ground survey. For noise contour mapping, existing ambient noise condition was assessed where project affected areas located. According to impact assessment, possible mitigation measures were suggested to enhance positive impacts and to minimize negative impact as much as possible.</p> <p>Assist in Environmental sampling (Surface water, groundwater, sediment, soil, paddy soil)</p>

12 **Publications:** NIL

13 **Certification:** ISO 9001:2015 (*Internal Auditor Training Course, Awareness & Interpretation of ISO 9001:2015 Requirements*)

I, the undersigned, certify that to the best of my knowledge and believe, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead



to my disqualification or dismissal, if engaged.

[Sign]

Date: 12.12.2017

Full name of authorized representative: Htet Arkar Soe

Curriculum Vitae

- 1 **Proposed Position:** Legal Analyst
- 2 **Name of Firm:** Myanmar Sustainable Development Engineering Services Company Limited
- 3 **Name of Staff:** Ms Chit Hsu San
- 4 **Date of Birth:** 08.07.1993 **Nationality:** Myanmar
- 5 **Education:** LL.M (Master of Law)

Institution (Date from - Date to)	Degree(s) or Diploma(s) obtained:
Yangon University, 2009 - 2013	Bachelor of Law (LL.B)
Yangon University, 2013 - 2016	Master of Law (LL.M)
Yangon University,	Master of Research (MRes)

- 6 **Membership of Professional Bodies:**
❖ Certified legal Consultant (transitional registration No.: 10117)

- 7 **Countries of Work Experience:** 2 years
Myanmar

- 8 **Languages:**

Language	Reading	Speaking	Writing
Burmese	Mother Tongue		
English	good	good	good

- 9 **Employment Record:**
From: 2015 To: Recent
Employer: Myanmar Sustainable Development Engineering Services Co., Ltd., Myanmar
Positions held: Legal consultant

- 10 **Detailed Tasks Assigned**

Key qualifications:

- Legal Analysis (Consultant Registration No. 10117)

11 Projects Undertaken that Best Illustrates Capability to Handle the Tasks Assigned
Name of assignment or project: Environmental and Social Impact Assessment (ESIA) for Nam Paw Hydropower Project, Muse, Myanmar Year: 2015 to ongoing Location: Myanmar Client: Great Hor Kham Public Co Ltd. Positions held: Assistant environmental consultant Main project features: Nam Paw Hydropower Project developed by Great Hor Kham Public Company Limited at Muse Township, Myanmar will fulfil the regional electrical requirement through connecting national grid. Feasibility study was conducted by Hunan Hydro & Power Design Institute, China and Myanmar Sustainable Development Engineering Services Company Limited took responsibility for Environmental, Socio-economic and Health Impact Assessment. Dam breaking analysis is being conducted by SYDRO, Germany. Activities performed: Relevant environmental laws and regulations in Myanmar were studied based on project information and potential effect on existing environment and socio-economy. Additionally, International treaties and conventions related to environmental affairs were considered in this report..

12 Publications:

13 Certification:

I, the undersigned, certify that to the best of my knowledge and believe, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.



Date: 12.12.2017

Full name of authorized representative: Ms Chit Hsu San

မီးဘေးကြိုတင်ကာကွယ်ရေး အစီအစဉ်

Fire Protection Programme
145.45MW Gas Engine Power Plant Project, Kyaukse District, Mandalay Region,
Myanmar

Introduction

This fire protection program is systematically drawn to prevent from fire break out in the project area of 145.45 MW Gas Engine Power Plant Project, Kyaukse District, Mandalay Region and make necessary preparation which will be able to put out the fire immediately in case of emergency.

Organization

This program is drawn and carried out by “PowerGen Kyaukse Company Limited”

Objectives

Fire Protection Program establishes to prevent from the loss of power plant including machineries, equipment, building, personal and circulation system of the Project area.

Facts of causing fire

The main facts of causing fire are as follows:

- (a) Arson made by unjust people in any ways
- (b) Unsystematic Installation and usage of electricity
- (c) Negligence in using fire
- (d) Fire break out starting from the surrounding such as buildings, houses, fields and etc.,
- (e) Events of the chemical incident

Procedures to be carried out

The following prevention measures shall be performed to protect from the cause of fire break-out:

- (a) To train people with the support Township fire departments
- (b) To form the fire protection and fire fighters teams.
- (c) To train practical proper usage of fire extinguisher, fire bucket, fire sand, fire stick and fire hook occasionally.
- (d) To prohibit using match lighter near the flammable or combustible material, take serious action if necessary, to fix smoking area.
- (e) To put out and systematically thrown away pieces of fire from the oven and cigarette.
- (f) To hang-up visibly fire precaution signboard, wall poster such as Fire Caution, No Smoking, etc. in necessary places.

- (g) To set a specific smoking place, do not keep the flammable or combustible material near that place.
- (h) To examine and report whether the fire-extinguishers are good or not at least every fifteen days. Near the fire-extinguishers, to hang-up the board in Myanmar Language.
- (i) To use electrical devices, Wires systematically and responsible persons to examine daily where there is wires burst.
- (j) To remove the fire blockade of article in front of the electric switch & fuse for easy switch off.
- (k) To clear burnable articles such as light switch, web, floss near light and to put fire extinguisher nearby to put out fire causing by electric & diesel.
- (l) To switch off the light after the work.
- (m) To service sprinkler or fire alarm system annually.
- (n) To maintain fire protection systems in an operative condition at all time and repaired where defective.
- (o) Not to block any items at the fire hydrants and fire connections. To place the telephone numbers in the visible places in order to contact when fire breaks out;

(1) Fire Department	01-384420???
(2) People' Police Force	01-635074???
(3) Hospital	01-384493???
- (p) To set up the First Aid procedure in front of the reception counter.
- (q) To learn fire-fighting instructions issued by the fire department.
- (r) To place the following materials in the visible place and easy accessible places;
 - (1) Fire extinguisher
 - (2) Sand bucket
 - (3) The bucket of water
 - (4) Fire stick
 - (5) Fire hook
 - (6) Touch light for using at night
 - (7) Axe

If fire breaks out in working hours, report to General Manager, Security Officer and Company Manager. Admin Manager, Security Officer and Admin Department quickly inform to the nearest Fire Bridges, People's Police Force and Hospital. The Fire Fighters Teams take responsible to put out the fire.

If fire breaks out outside the office, inform to officer.

Building Teams

To build the Supervisory Fire Fighters Team, Security Team and Rescue & Materials Moving Teams

Duties and Responsibilities of Fire Fighters Team

- (a) To observe in advance the place of fire extinguisher, fire stick, fire hook, sand bucket, light switch, main switch, etc. and to train the team to use *materials* in case of fire.
- (b) To practice to be able to use the fire extinguisher, fire stick, fire hook, sand bucket if necessary.
- (c) The members of the Fire Fighters Team at the *place* of fire or at the nearest place quickly put out the fire systematically before bursting into big flames. The rest members bring the fire extinguisher, fire stick; fire hook and sand bucket and extinguish the fire. Give the necessary assistant if the fire fighters get to the place of fire.
- (d) In case of fire, turn off the electric FUSE and Main Switch immediately.

The Duties and Responsibilities of Security Team

- (a) To carry out necessity for the safety of company staff and the security of company property.
- (b) To ask for responsibility for the safety to the members of security team in moving company own valuable properties, company own documents and materials to the other place giving priority not for getting burned in time of fire.
- (c) To assist and coordinate with the security members burned in time of fire.
- (d) To allow only in charge persons and members to enter, not allow any other. If not necessary, lock the main door burned in time of fire.
- (e) To return the Company own valuable properties, other documents and materials to the relevant persons systematically after getting over fire.

Rescue and Materials Moving Team

- (a) To move factory own cash, valuable things and other important documents and materials to the safe place quickly according to the priority rank of materials. If necessary, ask permission to use Company cars from the responsible person for moving things.
- (b) To coordinate with Security members and set the safe place for the moved cash and materials.
- (c) To pay special attention not to lose or damage of any cash and materials when moving cash and materials to the place free from fire.

- (d) To move the injured persons in the fire to the necessary place.
- (e) To coordinate with the Factory car drivers.
- (f) Not to get injured the staffs and if it does, coordinate with the Factory clinic doctors and nurses.
- (g) To help and rescue the ill persons, disable staffs in time of fire.
- (h) To remove patient to fresh air, lay down and rest
- (i) Of patient is not breathing, make sure airway is clear and applies artificial respiration.
Oxygen may be given, but only under supervision of a trained person.
- (j) To keep patient warm.
- (k) To call doctor at once or transport to doctor or hospital.

လူမှုမူလုံခြုံရေး၊ သက်သာချောင်ချိမှု၊ ဆောင်ရွက်မည့်
အစီအစဉ်များ

Social & Welfare Plan

1. Planning to create the safety and Pleasant Working Conditions & Environment as follows:
 - To construct the proper drainage system to get clean weather and fresh air ventilation system
 - To grow trees and beautiful flower plants in the compound of the 145.45 MW Gas Engine Power Plant Project (“Project”)
 - To arrange enough and suitable benches and tables for lunch and resting for workers
 - To train the workers to participate individually in “ Project” sanitation works and to arrange garbage bins around and the “Project” and the workers to do their jobs in the clean and pleasant environment
 - To arrange getting fresh air-ventilation at the working places with open windows exhaust fans and air –conditioner
 - To construct clean and hygienic toilets separating between man and women workers Daily sanitation shall be done using proper pest control system
 - To modify clear working procedures /rules
 - To help employees understand and collaborate with each other to complete their jobs effectively
 - To respect the differences of personal characteristic or identities between employees in the company
 - To learn more about the expectations of employees and the reasons they choose to work here
 - To educate staff on maintaining good personal bygiene, and wash hands with soap and water frequently
2. Planning to create the Social Welfares Fund for works as follows:
 - To arrange ferries for workers daily with proper vehicles without charges
 - To arrange first aid kits and facilities and special health care for staff with qualified healthcare certificate
 - To engage an in-house doctor for medical attention for all staff
 - To arrange purified drinking water
 - To take care the workers immediately when accidents happen by sending the injured workers to hospitals if necessary and these workers shall be given adequate care
 - To appoint workers by signing the contract according to prevailing Myanmar Laws.
 - To follow the minimum wage system lay down by the relevant authorities
 - To pay over time charges according to the rules and regulations
 - To arrange uniforms
3. Safe Working Conditions
For the Management of “ POWERGEN KYAUKSE” , the “Project” has the following plans /actions in plance:

- Project safe Work Practices
- In house Workplaces Safety and Health Rules and Regulations
- Fire Protection Program
- Emergency Plan
- Control of Consultant and Contractors
- Workplace Safety and Training
- Group Meeting
- Incident Investigations and Analysis
- Workplace Safety and Health Risk Assessment
- Occupational Health Programs
- Workplace Safety and Health Review and Audit
- First Aid Station

4. Corrective and Preventive Action

In the event of any non-compliance with the necessary measures, the Property/Project Manager shall require the errant main contractor staff or subcontractors to propose and implement immediately rectification measures so as to prevent future recurrence.

The Property/Project Manager shall adopt appropriate measures on any recalcitrant main contractor staff or sub-contractors who have persisted in failing to comply with rectification measures proposed. Measures may include, but not limiting, to issuing of warning letters, the imposition of administrative charges and demerit points or the debarment of subcontractors from future contractor tender exercise conducted. The Property/Project Manager also reserve the right to remove any staff or subcontractors from the site if they have been found incapable of adopting good preventive measures in the scope of work.

There are also basis site workplace safety and health rules, these are

- Safety helmet must be properly worn at all times while working on site, where applicable
- Safety shoes must be properly worn while working on site, where applicable
- Safety glasses must be worn when exposed to possible eyes injury
- No throwing of things from height
- Good housekeeping to be practiced everyday
- Obey all WSH and warning signs

Personal WSH rules

- Understand the job hazards and WSH procedures before embarking on the job
- Obey all WSH and warning signs
- No horseplay is allowed during work
- Report all unsafe conditions and practices to attention of the supervisor in charged
- All incidents regardless of severity must be reported immediately to the immediate supervisor
- Unauthorized operation of machinery, equipment and vehicle is strictly prohibited on site
- Think “Safety First” before you start work

- Does not litter drain cans, cigarette butts or food containers at the work place and keep work area clean at all time

Corporate Social Responsibilities

The company “ PowerGen Kyauske” pays the highest attention to corporate social responsibility, and multiple approaches will be employed for the best interest of both the community and the “Project”. We will contribute one percent (1%) of our net profit after tax annually; such contribution shall be subject to periodic review and the funds are to be allocated in the following areas:

- 1) Education (Scholarship programs, establishing schools and their maintenance)
- 2) Health (Donations to village hospitals and village health centers; setting up of sanitation systems for villages)
- 3) Regional Development(Establishing and construction of roads, water tube wells and electricity supply to villages)
- 4) Social Development (Donations to fire bridges and other social welfare services)
- 5) Religion (Donations to monasteries and pagodas of villages)

ဝန်ခံကတိပြုချက်များ

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စာအမှတ်။

။ PGK/KS-135/MIC- 24 /2018

ရက်စွဲ။

။ ၂၀၁၈ခုနှစ်၊ ဩဂုတ်လ(၆) ရက်

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ဥက္ကဋ္ဌ

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ရိုသေလေးစားစွာဖြင့်

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စာအမှတ်။

။ PGK/KS-135/MIC- 24 /2018

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စာအမှတ်။

။ PGK /KS-135/MIC- 26 /2018

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။ ၂၀၁၈ခုနှစ်၊ ဩဂုတ်လ(၆) ရက်

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အကြောင်းအရာ။ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုကော်မရှင်သို့ အဆိုပြုတင်ပြသည့် လုပ်ငန်းနှင့် ပတ်သက်၍ ကတိခံဝန်ချက်။

- ၁။ အထက်အကြောင်းအရာပါ ကိစ္စနှင့်ပတ်သက်၍ ကျွန်တော်များ The NIHC Consortium သည် မန္တလေးတိုင်း၊ ကျောက်ဆည်ခရိုင်၊ စဉ့်ကိုင်မြို့နယ် (230 kV) ဘဲလင်းဓါတ်အားခွဲရုံဝန်း အတွင်း (145.49 MW) ဓါတ်အားပေးစက်ရုံ တည်ဆောက်ပြီး ဓါတ်အားထုတ်လုပ်ရေး စီမံကိန်းအား အကောင်အထည်ဖော်ဆောင်ရွက်ရန် ဖက်စပ်ကုမ္ပဏီအဖြစ် PowerGen Kyaukse Co.,Ltd ကို (၂၇-၆-၂၀၁၈)တွင် ကုမ္ပဏီမှတ်ပုံတင်အမှတ် (၃၁၄အက်ဖ်စီ /၂၀၁၈-၂၀၁၉ (ရက)) ဖြင့် ဖွဲ့စည်းတည်ထောင်ထားပြီးဖြစ်ပါသည်။ အဆိုပါ စီမံကိန်းမှ လျှပ်စစ်ဓါတ်အား ထုတ်လုပ်သည့် လုပ်ငန်းအတွက် မြန်မာနိုင်ငံ ရင်းနှီးမြှုပ်နှံမှု ကော်မရှင်သို့ မြန်မာနိုင်ငံရင်းနှီးမြှုပ်နှံမှုဥပဒေနှင့် အညီခွင့်ပြုမိန့် လျှောက်ထားသည့် ကုမ္ပဏီဖြစ်ပါသည်။
- ၂။ အဆိုပြုသည့် ဝန်ဆောင်မှုလုပ်ငန်းများဆောင်ရွက်ရာတွင် ဖြစ်ပေါ်လာမည့် အသားတင် အမြတ်မှ တစ်(၁) ရာခိုင်နှုန်းအား ပတ်ဝန်းကျင်နှင့် လူမှုရေးဆိုင်ရာ ကိစ္စရပ်များတွင် အသုံးပြုရန်အတွက် ဖယ်ချန်လျက် ဆောင်ရွက်သွားမည်ဖြစ်ပါကြောင်း ဝန်ခံကတိပြုအပ်ပါသည်။

ရှိသေးလေးစားစွာဖြင့်

MAUNG KYAY
MANAGING DIRECTOR
POWERGEN KYAUKSE CO., LTD.

ကုမ္ပဏီဆိုင်ရာအထောက်အထားများ

(က) ဘဏ်အထောက်အထားများ

MYANMA FOREIGN TRADE BANK

BANK STATEMENT

Account No: 1DA0405506
Name of Account: NATIONAL INFRASTRUCTURE HOLDINGS CO; LTD
Address: NO.36, THEINPHYU ROAD ,PAZUNDAUNG T/S, YGN.
Bank Statement for the month of: From 01/03/2018 To 05/03/2018

Print Date & Time : 24/07/2018-02:52 PM

Date	Particular	Chq; No.	C/T/L	CUR	Debit	Credit	Balance
	BALANCE FORWARD			USD			4,145.59
05/03/2018	FR 1DA0495758 ORIENT PEARL CO LTD	L	TRF	USD		1,460,000.00	1,464,145.59
Grand Total					0.00	1,460,000.00	


Unless the Bank is immediately notified of any discrepancy found in the statement of account, it will be taken that the account has been found to be correct.

TRANSACTION CODE

CSH = CASH
TRF = TRANSFER
CLG = CLEARING

Number Of Debit =0
Number Of Credit =1

MANAGER


Asst. Manager
Current Account Section
Myanmar Foreign Trade Bank
ASST. MANAGER

MYANMA FOREIGN TRADE BANK

BANK STATEMENT

Account No: 1KA0400039
Name of Account: NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD
Address: NO.36, THEINPHYU RD, PAZUNDAUNG T/S, YANGON

Bank Statement for the month of : From 01/08/2016 To 15/08/2016

Print Date & Time :15/06/2017-12

Date	Particular	Chq; NoC/T/L	Debit	Credit	Balance
	BALANCE FORWARD				0.00
12/08/2016	CD	CSH		10,000.00	10,000.00
15/08/2016	AYA /A	CLG		500,000,000.00	500,010,000.00
15/08/2016	KBZ /A	CLG		500,000,000.00	1,000,010,000.00
15/08/2016	KBZ /A	CLG		500,000,000.00	1,500,010,000.00
15/08/2016	KBZ /A	CLG		500,000,000.00	2,000,010,000.00
15/08/2016	KBZ /A	CLG		82,300,000.00	2,082,310,000.00
15/08/2016	AYA /A	CLG		500,000,000.00	2,582,310,000.00
	Grand Total		0.00	2,582,310,000.00	2,582,310,000.00

Unless the Bank is immediately notified of any discrepancy found in the statement of account, it will be taken that the account has been found to be correct.

TRANSACTION CODE

CSH = CASH
TRF = TRANSFER
CLG = CLEARING
Number Of Debit =0
Number Of Credit =7

MANAGER

May 15/6
Asst. Manager
Current Accounts Section
Myanma Foreign Trade Bank
ASST: MANAGER

MYANMA FOREIGN TRADE BANK

BANK STATEMENT

5

Account No: 1DA0496700
 Name of Account: MYANMAR CHEMICAL MACHINERY CO LTD
 Address: 1120-1121, THUMINGALAR ST, THINGANGYUN T/S, YGN.
 Bank Statement for the month of : From 01/04/2016 To 31/03/2017

Print Date & Time : 18/07/2018-03:39 PM

Date	Particular	Chq; No.	C/T/L	CUR	Debit	Credit	Balance
	BALANCE FORWARD			USD			118,846.63
06/04/2016	✓60707/G/2015-2016(P)		TRF	USD		1,600.00	120,446.63
06/04/2016	60575/G/2015-2016(P)		TRF	USD		308.00	120,754.63
22/04/2016	60650/G/2015-2016(P)		TRF	USD		4,690.00	125,444.63
31/05/2016	✓60546/G/2015-2016(P)	L	TRF	USD	200.00		125,244.63
31/05/2016	60545/G/2015-2016(P)	L	TRF	USD	585.00		124,659.63
09/06/2016	✓ITTP2487/16		TRF	USD		5,480,242.00	5,604,901.63
13/06/2016	61072/G/2015-2016(P)		TRF	USD		870.00	5,605,771.63
14/06/2016	60649/G/2015-2016(P)	L	TRF	USD	3,830.00		5,601,941.63
14/06/2016	60608/G/2015-2016(P)	L	TRF	USD	8,740.92		5,593,200.71
14/06/2016	60682/G/2015-2016(P)	L	TRF	USD	22,980.00		5,570,220.71
17/06/2016	61140/G/2014-2015(P)		TRF	USD		26,480.15	5,596,700.86
17/06/2016	61141/G/2014-2015(P)		TRF	USD		13,274.00	5,609,974.86
17/06/2016	60609/G/2015-2016(P)	L	TRF	USD	1,456.83		5,608,518.03
20/06/2016	60089/G/2016-2017(P)	L	TRF	USD	5,480,242.00		128,276.03
22/06/2016	60118/G/2015-2016(P)	L	TRF	USD	61.96		128,214.07
29/07/2016	✓60118/G/2015-2016(P)		TRF	USD		24,783.00	152,997.07
03/08/2016	✓60153/G/2016-2017(P)	L	TRF	USD	2,663.00		150,334.07
03/08/2016	60154/G/2016-2017(P)	L	TRF	USD	9,802.00		140,532.07
16/08/2016	ITTP043082016	L	TRF	USD		1,999,985.00	2,140,517.07
17/08/2016	60193/G/2016-2017(P)	L	TRF	USD	2,015,000.00		125,517.07
18/08/2016	60111/G/2015-2016(P)	L	TRF	USD	179.07		125,338.00
18/08/2016	61050/G/2014-2015(P)	L	TRF	USD	3,425.16		121,912.84
31/08/2016	61189/G/2015-2016(P)	L	TRF	USD	3,479.50		118,433.34
31/08/2016	61188/G/2015-2016(P)	L	TRF	USD	27,836.00		90,597.34

Date	Particular	Chq; No.	C/T/L	CUR	Debit	Credit	Balance
07/09/2016	✓ 60244/G/2016-2017(P)	L	TRF	USD	25,187.50		65,409.84
30/09/2016	Auto Exchange Adj Vr		TRF	MM K			65,409.84
05/10/2016	✓ 60374/G/2016-2017(P)	L	TRF	USD	30,225.00		35,184.84
25/10/2016	61141/G/2015-2016(P)		TRF	USD		1,829,520.00	1,864,704.84
25/10/2016	60487/G/2016-2017(P)	L	TRF	USD	3,107.00		1,861,597.84
04/11/2016	✓ 61140/G/2015-2016(P)		TRF	USD		228,690.00	2,090,287.84
17/11/2016	60627/G/2016-2017(P)	L	TRF	USD	1,540.00		2,088,747.84
18/11/2016	60111/G/2015-2016(P)		TRF	USD		71,447.43	2,160,195.27
23/11/2016	60666/G/2016-2017(P)	L	TRF	USD	1,828.00		2,158,367.27
22/12/2016	✓ 61319/G/2015-2016(P)		TRF	USD		150,000.00	2,308,367.27
26/12/2016	60820/G/2016-2017(P)	L	TRF	USD	16,284.00		2,292,083.27
05/01/2017	✓ 60374/G/2016-2017(P)		TRF	USD		30,000.00	2,322,083.27
31/01/2017	61111/G/2016-2017(P)	L	TRF	USD	847.00		2,321,236.27
31/01/2017	61110/G/2016-2017(P)	L	TRF	USD	1,028.00		2,320,208.27
31/01/2017	61112/G/2016-2017(P)	L	TRF	USD	10,210.00		2,309,998.27
31/01/2017	61108/G/2016-2017(P)	L	TRF	USD	18,684.00		2,291,314.27
31/01/2017	61107/G/2016-2017(P)	L	TRF	USD	91,859.50		2,199,454.77
31/01/2017	61113/G/2016-2017(P)	L	TRF	USD	112,616.62		2,086,838.15
01/02/2017	✓ 61115/G/2016-2017(P)	L	TRF	USD	529.00		2,086,309.15
01/02/2017	61109/G/2016-2017(P)	L	TRF	USD	8,907.00		2,077,402.15
01/02/2017	61116/G/2016-2017(P)	L	TRF	USD	10,670.00		2,066,732.15
02/02/2017	61118/G/2016-2017(P)	L	TRF	USD	118,487.24		1,948,244.91
02/02/2017	61119/G/2016-2017(P)	L	TRF	USD	943,205.35		1,005,039.56
09/02/2017	60153/G/2016-2017(P)		TRF	USD		2,463.00	1,007,502.56
14/02/2017	60627/G/16-17(P)		TRF	USD		1,440.00	1,008,942.56
15/02/2017	60487/G/16-17(P)		TRF	USD		2,907.00	1,011,849.56
15/02/2017	60154/G/16-17(P)		TRF	USD		9,602.00	1,021,451.56
23/02/2017	61251/G/16-17(P)	L	TRF	USD	4,006.00		1,017,445.56

Date	Particular	Chq; No.	C/T/L	CUR	Debit	Credit	Balance
23/02/2017	61253/G/16-17(P)	L	TRF	USD	31,404.24		986,041.32
10/03/2017	61050/G/14-15(P)	L	TRF	USD	3,425.15		982,616.17
10/03/2017	61372/G/16-17(P)	L	TRF	USD	11,810.00		970,806.17
20/03/2017	61429/G/16-17(P)	L	TRF	USD	131,285.16		839,521.01
22/03/2017	60244/G/16-17(P)		TRF	USD		25,000.00	864,521.01
31/03/2017	Auto Exchange Adj Vr		TRF	MMK			864,521.01
Grand Total					9,157,627.20	9,903,301.58	

Unless the Bank is immediately notified of any discrepancy found in the statement of account, it will be taken that the account has been found to be correct.

TRANSACTION CODE

CSH = CASH

TRF = TRANSFER

CLG = CLEARING

Number Of Debit =37

Number Of Credit =19

MANAGER

Asst. Manager
Current Account Section
ASST. MANAGER
Myanmar Foreign Trade Bank

ကုမ္ပဏီဆိုင်ရာအထောက်အထားများ

(ခ) ကုမ္ပဏီမှတ်ပုံတင် / သင်းဖွဲ့မှတ်တမ်းနှင့်
သင်းဖွဲ့စည်းမျဉ်းများ



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
စီမံကိန်းနှင့်ဘဏ္ဍာရေးဝန်ကြီးဌာန

ကုမ္ပဏီမှတ်ပုံတင်လက်မှတ် (ယာယီ)

အမှတ် ၃၁၄အက်ဖ်စီ / ၂၀၁၈-၂၀၁၉ (ရက)

မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေအရ ..မါဝါဂျန် ကျောက်ဆည် ကုမ္ပဏီ လီမိတက်..
.....အား ပေးချန်တာဝန် ကန့်သတ်ထားသော လီမိတက်
ကုမ္ပဏီအဖြစ် ၂၀၁၈ခုနှစ်၊ ဇွန် လ၊ ၂၇ ရက်နေ့တွင် မှတ်ပုံတင်ခွင့်ပြုလိုက်သည်။

ညွှန်ကြားရေးမှူးချုပ်(ကိုယ်စား)

(မျိုးမင်း၊ ညွှန်ကြားရေးမှူး)

ရင်းနှီးမြှုပ်နှံမှုနှင့်ကုမ္ပဏီများညွှန်ကြားမှုဦးစီးဌာန

THE GOVERNMENT OF THE REPUBLIC OF THE UNION OF MYANMAR
MINISTRY OF PLANNING AND FINANCE

CERTIFICATE OF INCORPORATION (TEMPORARY)

NO. 314FC of 2018-2019 (YGN)

I hereby certify that POWERGEN KYAUKSE COMPANY LIMITED

..... is incorporated
under the Myanmar Companies Act as a Limited Company on the
..... TWENTY-SEVENTH day of JUNE
..... TWO THOUSAND AND EIGHTEEN

For Director General
(Myo Min - Director)

Directorate of Investment and Company Administration

ဤကုမ္ပဏီ မှတ်ပုံတင် လက်မှတ်(ယာယီ)သည် မှတ်ပုံတင်ရက်စွဲ
(၂၇-၆-၂၀၁၈) မှ (၂၆-၁၂-၂၀၁၈) ရက်နေ့အထိ (၆)လသက်တမ်း
အတွက်သာ ဖြစ်သည်။ ယာယီသက်တမ်း မကုန်ဆုံးမီ အမြဲတမ်းမှတ်ပုံတင်
လက်မှတ် (မူရင်း)နှင့် လဲလှယ်ရမည်ဖြစ်ပါသည်။



ညွှန်ကြားရေးမှူးချုပ်(ကိုယ်စား)
(သက်ပိုင်ချုပ်ကိုင်သူညွှန်ကြားရေးမှူး)

Issued Date:



THE GOVERNMENT OF THE REPUBLIC OF THE UNION OF MYANMAR
MINISTRY OF PLANNING AND FINANCE

FORM 1
FORM OF PERMIT (TEMPORARY)
(See section 27 A)

Permit No. 314FC / 2018-2019 (YGN)
Date 27th June, 2018

The Ministry of Planning and Finance of the Government of the Republic of the Union of Myanmar in pursuance of the Myanmar Companies Act hereby grants a permit to the POWERGEN KYAUKSE COMPANY LIMITED

..... in respect of which particulars are detailed below, to carry on its business within the Republic of the Union of Myanmar subject to the provisions contained in the said Act.

- (1) Name of the Company Pow erGen Kyaukse Co., Ltd.
- (2) Country of incorporation of the company. The Republic of the Union of Myanmar.
- (3) Location of the company's Head Office and / or Principal Office in the Republic of the Union of Myanmar. No.36, Theinphyu Road, Pazundating Township, Yangon, Myanmar.
- (4) The object for which the company is formed (field of business). Mentioned in back page.
- (5) (a) The amount of Capital and the number of shares into which the Capital is divided. US\$1,000,000 divided into 1,000,000
(b) If more than one class of shares is authorised, the description of each class. shares of US\$ 1 each.
Only one class.
- (6) The names, addresses and nationality of the directors. As per List attached.
- (7) The maximum amount of indebtedness which may be incurred by the company and also a prohibition against the contracting of debts in excess of that amount. As per conditions attached.
- (8) Period of validity of permit. June, 27, 2018 to December, 26, 2018. (SIX MONTHS)
As per conditions attached.
- (9) Statement of compliance with legal requirements for issue of Capital including the amount to be paid in before business is commenced. The conditions attached to the permit and conditions as may be prescribed from time to time are also to be strictly adhered to by the company.
- (10) Statement of compliance with such conditions as may be prescribed. By order


For Director General
(Myo Min - Director)

Directorate of Investment and Company Administration

The business objectives mentioned in the Memorandum of Association shall be allowed to perform. If it is necessary, permit or license from relevant Union Ministries, Departments and Organizations of the Republic of the Union of Myanmar must be obtained in accordance with existing laws, rules and regulations.

- (a) Generating electricity
- (b) Distributing electricity
- (c) Service regarding with generation and distribution of electricity
- (d) Importation, storage and utilization of Liquefied Petroleum Gas (LPG), fuel oil and any other energy products, etc for generation and distribution of electricity


For Director General
(Thet Paing- Deputy Director)

Issued Date:

**FORM XXVI****PARTICULARS OF DIRECTORS, MANAGERS AND MANAGING AGENTS AND OF ANY CHANGES THEREIN****(Myanmar Companies Act, See Section 87)**

Name of Company : PowerGen Kyaukse Company Limited

Presented by U Maung Kyay

The Present Christian name or names of surnames	Nationality, National Registration Card No.	Usual Residential Address	Other Business Occupation	Changes
1. U Maung Kyay	Myanmar 12/La Tha Na (N) 018174	No.(C/4), Mon Myat Myittar Residence, Pin Shwe Nyaung Street, Tamwe Kalay Ward, Tamwe Township, Yangon, Myanmar.	Merchant	
2. U Than Myint	Myanmar 12/La Ma Ta (N) 027772	No.45/A61/2 Miles, Pyay Road, Hlaing Township, Yangon, Myanmar.	Merchant	
3. U Aung Hlaing Oo	Myanmar 12/La Ma Ta (N) 025897	No.1120-1121, Thu Mingalar Street, 16/4 Ward, Thingangyun Township, Yangon, Myanmar.	Merchant	
4. Daw Noe Noe Su Aung	Myanmar 12/Tha Ga Ka (N) 185395	No.1120-1121, Thu Mingalar Street, 16/4 Ward, Thingangyun Township, Yangon, Myanmar.	Merchant	
5. Mr. Zhang Yushi	Chinese Passport No. G49052786	No.882-1 Tong'an Road, Laoshan District Qingdao, China.	Merchant	

NOTE : (1) A complete list of the Directors or Managers or Managing Agents shown as existing in the last particulars.

(2) A note of the changes since the last list should be made in the column for "Changes" by placing against the new Director's name the word "in place of" and by writing against any former Director's name the word "dead" "resigned" or as the case may be giving the date of change against the entry

Signature

Dated this 27.6.2018

Designation Proposed Director

မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေ

အစုရှယ်ယာများဖြင့် ပေးရန်တာဝန် ကန့်သတ်ထားသော အများနှင့် မသက်ဆိုင်သည့် ကုမ္ပဏီ

ပါဝါဂျန် ကျောက်ဆည် ကုမ္ပဏီလီမိတက်

၏

သင်းဖွဲ့မှုတ်တမ်း

နှင့်

သင်းဖွဲ့စည်းမျဉ်းများ



THE MYANMAR COMPANIES ACT

PRIVATE COMPANY LIMITED BY SHARES

Memorandum Of Association

AND

Articles of Association

OF

POWERGEN KYAUKSE COMPANY LIMITED



မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေ

အစုရှယ်ယာများဖြင့် ပေးရန်တာဝန် ကန့်သတ်ထားသော အများနှင့် မသက်ဆိုင်သည့် ကုမ္ပဏီ

ပါဝါဂျန် ကျောက်ဆည် ကုမ္ပဏီလီမိတက်

၏

သင်းဖွဲ့မှတ်တမ်း



- ၁။ ကုမ္ပဏီ၏ အမည်သည် ပါဝါဂျန် ကျောက်ဆည် ကုမ္ပဏီလီမိတက် ဖြစ်ပါသည်။
- ၂။ ကုမ္ပဏီ၏ မှတ်ပုံတင်အလုပ်တိုက်သည် ပြည်ထောင်စုမြန်မာနိုင်ငံတော်အတွင်း တည်ရှိရမည်။
- ၃။ ကုမ္ပဏီတည်ထောင်ခြင်း၏ ရည်ရွယ်ချက်များမှာ တစ်ဖက်စာမျက်နှာပါအတိုင်း ဖြစ်ပါသည်။
- ၄။ အစုဝင်များ၏ ပေးရန်တာဝန်ကို ကန့်သတ်သည်။
- ၅။ ကုမ္ပဏီ၏ သတ်မှတ်မတည်ငွေရင်းသည် အမေရိကန်ဒေါ်လာ ၁,၀၀၀,၀၀၀. ၀၀/- (အမေရိကန်ဒေါ်လာတစ်သန်းတိတိ) ဖြစ်၍ အမေရိကန်ဒေါ်လာ ၁. ၀၀/- (အမေရိကန် ဒေါ်လာ တစ်ဒေါ်လာတိတိ) တန် အစုရှယ်ယာပေါင်း (၁,၀၀၀,၀၀၀) ခွဲထားပါသည်။ ကုမ္ပဏီ၏ ရင်းနှီးငွေကို ကုမ္ပဏီ၏ စည်းမျဉ်းများနှင့် လက်ရှိတရားဝင် တည်ဆဲဖြစ်နေသော တရားဥပဒေ ပြဌာန်းချက်များ နှင့်အညီ အထွေထွေသင်းလုံးကျွတ် အစည်းအဝေး၌ တိုးမြှင့်နိုင်ခွင့်၊ လျှော့ချနိုင်ခွင့်နှင့် ပြင်ဆင်နိုင်ခွင့် အာဏာ ရှိစေရမည်။

၆။ ကုမ္ပဏီတည်ထောင်ခြင်း၏ ရည်ရွယ်ချက်များမှာ —


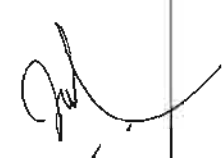
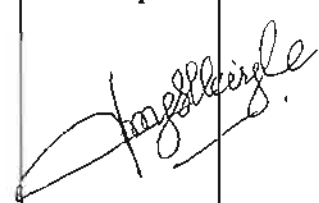
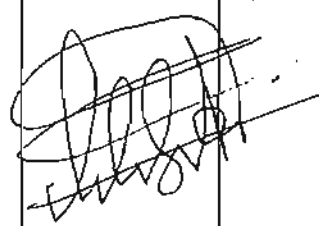
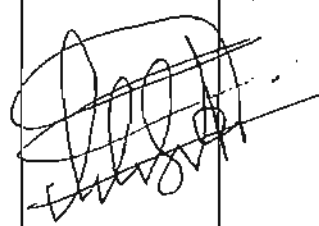

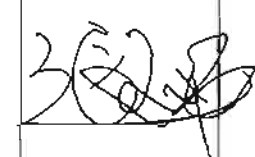
- လျှပ်စစ်ဓါတ်အားထုတ်လုပ်ခြင်း
- လျှပ်စစ်ဓါတ်အားဖြန့်ဖြူးရောင်းချခြင်း
- လျှပ်စစ်ဓါတ်အားထုတ်လုပ်ခြင်းဖြန့်ဖြူးရောင်းချခြင်းနှင့်ဆိုင်သော ဝန်ဆောင်မှုလုပ်ငန်းများ
- လျှပ်စစ်ဓာတ်အားထုတ်လုပ်ဖြန့်ဖြူးရောင်းချရန်အတွက် လိုအပ်သည့် ရေနံဓာတ်ငွေ့ ရည်၊ လောင်စာ နှင့် အခြားသောစွမ်းအင်ထုတ်ကုန်များ တင်သွင်းခြင်း၊ သိုလှောင်ခြင်းနှင့် သုံးစွဲခြင်း

၇။ ကုမ္ပဏီမှ သင့်တော်လျှောက်ပတ်သည်ဟု ယူဆပါက ကုမ္ပဏီ၏ စီးပွားရေးလုပ်ငန်းတွင် အကျိုးရှိစေရန်အတွက် မည်သည့်ပုဂ္ဂိုလ်၊ စီးပွားရေးအဖွဲ့အစည်း၊ ကုမ္ပဏီ၊ ဘဏ် သို့မဟုတ် ငွေကြေးအဖွဲ့အစည်းထံမှမဆို ငွေချေးယူရန်။

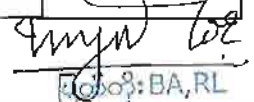
ခြွင်းချက်။ ကုမ္ပဏီသည် အထက်ဖော်ပြပါ ရည်ရွယ်ချက်များကို ပြည်ထောင်စုသမ္မတ မြန်မာနိုင်ငံတော် အတွင်း၌ ဖြစ်စေ၊ အခြားမည်သည့်အရပ်ဒေသ၌ ဖြစ်စေ၊ အချိန်ကာလအလိုက် တည်မြဲ နေသော တရားဥပဒေများ၊ အမိန့်ကြော်ငြာစာများ၊ အမိန့်များက ခွင့်ပြုထားသည့် လုပ်ငန်းများမှအပ အခြားလုပ်ငန်းများကို လုပ်ကိုင်ဆောင်ရွက်ခြင်းမပြုပါ။ ထို့အပြင် ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော် အတွင်း၌ အချိန်ကာလအားလျော်စွာ တည်မြဲနေသည့် တရားဥပဒေ ပြဌာန်းချက်များ၊ အမိန့်ကြော်ငြာစာများ၊ အမိန့်များနှင့် လျော်ညီသင့်တော်ခြင်း သို့မဟုတ် ခွင့်ပြုထားခြင်း ရှိမှသာလျှင် လုပ်ငန်းများကို ဆောင်ရွက်မည်ဟု ခြွင်းချက်ထားရှိပါသည်။

(၃)

ဘောက်တွင် အမည်၊ နိုင်ငံသား၊ နေရပ်နှင့် အကြောင်းအရာစုံလင်စွာပါသော ဇယားတွင် လက်မှတ် ရေးထိုးသူ ကျွန်ုပ်တို့ ကိုယ်စီကိုယ်တိုင်သည် ဤသင်းဖွဲ့မှတ်တမ်းအရ ကုမ္ပဏီတစ်ခုဖွဲ့စည်းရန် လိုလားသည့် အလျောက် ကျွန်ုပ်တို့၏ အမည်အသီးသီးနှင့် ယှဉ်တွဲ၍ပြထားသော အစုရှယ်ယာများကို ကုမ္ပဏီ၏ မတည်ရင်းနှီးငွေတွင် ထည့်ဝင်ရယူကြရန် သဘောတူကြပါသည်။

စဉ်	အစုထည့်ဝင်သူများ၏ အမည်၊ နေရပ်လိပ်စာနှင့် အလုပ်အကိုင်	နိုင်ငံသားနှင့် အမျိုးသား မှတ်ပုံတင်အမှတ်	ဝယ်ယူသော အစုရှယ်ယာ ဦးရေ	ထိုးမြဲလက်မှတ်
၁	နေရှင်နယ် အင်ဖရာထရက်ချာ ဟိုးလ် ဝင်း(စ်) ကုမ္ပဏီလီမိတက် အမှတ် - ၃၆၊ သိမ်ဖြူလမ်း၊ ပုဇွန်တောင်မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။ ကိုယ်စားပြုသူ ဦးဟောင်ကျေး (ကုန်သည်) အမှတ်-၈/၄၊ မွန်မြတ်မေတ္တာ ဘိမ်ရာ၊ ပင်ရွှေညောင်လမ်း၊ တာမွေမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။ ဦးသန်းမြင့် (ကုန်သည်) အမှတ် - ၄၅/အေ၊ ၆မိုင်ခွဲ၊ ပြည်လမ်း၊ လှိုင်မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။	ကုမ္ပဏီမှတ်ပုံတင်အမှတ် ၅၅၁၇/၂၀၁၄ - ၂၀၁၅ ၁၂/လသန (နိုင်) ၀၁၈၁၇၄ ၁၂/လမတ (နိုင်) ၀၂၇၇၇၂	၈၁, ၀၀၀	   
၂	မြန်မာစာတုဝေနှင့်စက်ပစ္စည်းကုမ္ပဏီလီမိတက် ကိုယ်စားပြုသူ - ဦးအောင်လှိုင်ဦး (ကုန်သည်) အမှတ်-၁၁၂၀-၁၁၂၁၊ သုမင်္ဂလာလမ်း၊ ၁၆/၄ ရပ်ကွက်၊ သယ်န်းကျွန်းမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။ ဒေါ်နီနီစုအောင် (ကုန်သည်) အမှတ်-၁၁၂၀-၁၁၂၁၊ သုမင်္ဂလာလမ်း၊ ၁၆/၄ ရပ်ကွက်၊ သယ်န်းကျွန်းမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။	ကုမ္ပဏီမှတ်ပုံတင်အမှတ် ၆၆၈/၂၀၀၁-၂၀၀၂ ၁၂/လမတ (နိုင်) ၀၂၅၈၉၇ ၁၂/သယက (နိုင်) ၁၈၅၃၉၅	၅၅,၅၀၀	 
၃	SEPCOIII Electric Power Construction Co.,Ltd No.882-1 Tong'an Road, Laoshan District, Qingdao, China. Represented by Mr. Zhang Yushi (Businessman) No. 882-1 Tong'an Road, Laoshan District, Qingdao, China.	Incorporated in the People Republic of China 913702121654224203 Passport No. G49052786	၁၃,၅၀၀	

ရန်ကုန်၊ နေ့စွဲ၊ ၂၀၁၈ ခုနှစ်၊ ဇွန် လ၊ ၂၇ ရက်။
အထက်ပါလက်မှတ်ရှင်များသည် ကျွန်ုပ်တို့၏ ရွှေ့မှောက်တွင် လက်မှတ်ရေးထိုးကြပါသည်။


[ထိုးထိုး BA, RL]

တရားဥပဒေစနစ်ရေးရာ [စဉ် ၄၇၆၃]

မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေ

အစုရှယ်ယာများဖြင့် ပေးရန်တာဝန် ကန့်သတ်ထားသော အများနှင့် မသက်ဆိုင်သည့် ကုမ္ပဏီ

ပါဝါလျန် ကျောက်ဆည် ကုမ္ပဏီလီမိတက်

၏

သင်းဖွဲ့စည်းမျဉ်းများ



- ၁။ ဤသင်းဖွဲ့စည်းမျဉ်းနှင့် လိုက်လျောညီထွေမဖြစ်သည့် စည်းမျဉ်းများမှအပ၊ မြန်မာနိုင်ငံ ကုမ္ပဏီများအက်ဥပဒေ နောက်ဆက်တွဲပထမဇယားပုံစံ --'က' ပါ စည်းမျဉ်းများသည် ဤကုမ္ပဏီနှင့် သက်ဆိုင်စေရမည်။ မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေပုဒ်မ ၁၇ (၂) တွင် ဖော်ပြပါရှိသည့် မလိုက်နာမနေရ စည်းမျဉ်းများသည် ဤကုမ္ပဏီနှင့် အစဉ်သဖြင့် သက်ဆိုင်စေရမည်။

အများနှင့် မသက်ဆိုင်သော ကုမ္ပဏီ

- ၂။ ဤကုမ္ပဏီသည် အများနှင့်မသက်ဆိုင်သည့်ကုမ္ပဏီဖြစ်၍ အောက်ပါသတ်မှတ်ချက်များသည် အကျိုး သက်ရောက်စေရမည်။

(က) ဤကုမ္ပဏီက ခန့်အပ်ထားသော ဝန်ထမ်းများမှအပ ဤကုမ္ပဏီ၏ အစုရှင်အရေအတွက်ကို ငါးဆယ်အထိသာ ကန့်သတ်ထားသည်။

(ခ) ဤကုမ္ပဏီ၏ အစုရှယ်ယာသို့မဟုတ် ဒီဘင်ချာစတော့(ခ်) တစ်ခုခုအတွက် ငွေထည့်ဝင်ရန် အများပြည်သူတို့အား ကမ်းလှမ်းခြင်းမပြုလုပ်ရန် တားမြစ် ထားသည်။

မတည်ရင်းနှီးငွေနှင့် အစုရှယ်ယာ

- ၃။ ကုမ္ပဏီ၏ သတ်မှတ်မတည်ငွေရင်းမှာ အမေရိကန်ဒေါ်လာ ၁,၀၀၀,၀၀၀ .၀၀/- (အမေရိကန် ဒေါ်လာ တစ်သန်း တိတိ) ဖြစ်၍ အမေရိကန်ဒေါ်လာ ၁.၀၀/- (အမေရိကန်ဒေါ်လာ တစ်ဒေါ်လာ တိတိ) တန် အစုရှယ်ယာပေါင်း (၁,၀၀၀,၀၀၀) ခွဲထားပါသည်။ ကုမ္ပဏီ၏ရင်းနှီးငွေကို ကုမ္ပဏီ၏ စည်းမျဉ်းများနှင့် လက်ရှိတရားဝင် တည်ဆဲဖြစ်နေ သော တရားဥပဒေ ပြဌာန်းချက်များနှင့်အညီ အထွေထွေသင်းလုံးကျွတ် အစည်းအဝေး၌ တိုးမြှင့်နိုင်ခွင့်၊ လျှော့ချနိုင်ခွင့်နှင့် ပြင်ဆင်နိုင်ခွင့် အာဏာရှိစေရမည်။

- ၄။ မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေပါ ပြဌာန်းချက်များကို မထိခိုက်စေလျက် အစုရှယ်ယာ များသည် ဒါရိုက်တာများ၏ ကြီးကြပ်ကွပ်ကဲမှု အောက်တွင်ရှိစေရမည်။ ၎င်းဒါရိုက်တာများသည် သင့်လျော်သော ပုဂ္ဂိုလ်များအား သတ်မှတ်ချက် အခြေအနေ တစ်စုံတစ်ရာဖြင့် အစုရှယ်ယာများကို ခွဲဝေချထားခြင်း သို့မဟုတ် ထုခွဲရောင်းချခြင်းတို့ကို ဆောင်ရွက်နိုင်သည်။

- ၅။ အစုရှယ်ယာလက်မှတ်များကို အထွေထွေမန်နေဂျာ သို့မဟုတ် ဒါရိုက်တာအဖွဲ့က သတ်မှတ်သည့် အခြား ပုဂ္ဂိုလ်များက လက်မှတ်ရေးထိုး၍ ကုမ္ပဏီ၏ တံဆိပ်ရိုက်နှိပ် ထုတ်ပေးရမည်။ အစုရှယ်ယာ လက်မှတ်သည် ပုံပန်းပျက်ခြင်း၊ ပျောက်ဆုံးခြင်း သို့မဟုတ် ပျက်စီးခြင်းဖြစ်ပါက အဖိုးအခဖြင့် ပြန်လည်အသစ်ပြုလုပ်ပေးမှုကို သော်လည်းကောင်း၊ ဒါရိုက်တာများက သင့်လျော်သည်ဟု ယူဆသော အခြားသက်သေခံ အထောက်အထား တစ်စုံတစ်ရာကို တင်ပြစေ၍သော်လည်းကောင်း ထုတ်ပေးနိုင်သည်။ ကွယ်လွန်သွားသော အစုရှယ်ယာရှင် တစ်ဦး၏ တရားဝင်ကိုယ်စားလှယ်ကို ဒါရိုက်တာများက အသိအမှတ် ပြုပေးရမည်ဖြစ်သည်။
- ၆။ ဒါရိုက်တာများသည် အစုရှင်များက ၎င်းတို့၏ အစုရှယ်ယာများအတွက် မပေးသွင်းရသေးသော ငွေများကို အခါအားလျော်စွာ တောင်းဆိုနိုင်သည်။ အစုရှင်တိုင်းကလည်း ၎င်းတို့ထံ တောင်းဆိုသည့် အကြိမ်တိုင်းအတွက် ဒါရိုက်တာများက သတ်မှတ်သည့် ပုဂ္ဂိုလ်များထံ သတ်မှတ်သည့်အချိန်နှင့် နေရာတွင် ပေးသွင်းစေရန် တာဝန်ရှိစေရမည်။ ဆင့်ခေါ်မှုတစ်ခု အတွက် အရစ်ကျပေးသွင်းစေခြင်း၊ သို့မဟုတ် ပယ်ဖျက်ခြင်း သို့မဟုတ် ရွှေ့ဆိုင်းခြင်းတို့ကို ဒါရိုက်တာများက သတ်မှတ်နိုင်သည်။

ဒါရိုက်တာများ

- ၇။ သင်းလုံးကျွတ် အစည်းအဝေးက တစ်စုံတစ်ရာ သတ်မှတ်ပြဌာန်းမှု မပြုလုပ်သမျှ ဒါရိုက်တာများ၏ အရေအတွက်သည် (၆)ဦး ထက်မနည်း၊ (၂၀)ဦးထက်မများစေရ။ ပထမဒါရိုက်တာများသည် —

- (၁) ဦးမောင်ကျေး
- (၂) ဦးသန်းမြင့်
- (၃) ဦးအောင်လှိုင်ဦး
- (၄) ဒေါ်နီနီစုအောင်
- (၅) Mr. Zhang Yushi

- ၈။ ဒါရိုက်တာများသည် ၎င်းတို့အနက်မှတစ်ဦးကို မန်နေဂျင်းဒါရိုက်တာအဖြစ် အချိန်အခါအလိုက် သင့်လျော်သော သတ်မှတ်ချက်များ၊ ဉာဏ်ပူဇော်ခများဖြင့် ခန့်ထားရမည်ဖြစ်ပြီး အခါအားလျော်စွာ ဒါရိုက်တာအဖွဲ့က ပေးအပ်သော အာဏာများအားလုံးကို ၎င်းက အသုံးပြုနိုင်သည်။
- ၉။ ဒါရိုက်တာတစ်ဦးဖြစ်မြောက်ရန် လိုအပ်သော အရည်အချင်းသည် ကုမ္ပဏီ၏ အစုရှယ်ယာ အနည်းဆုံး (-)စု ကိုပိုင်ဆိုင်ခြင်းဖြစ်၍ ၎င်းသည် မြန်မာနိုင်ငံ ကုမ္ပဏီအက်ဥပဒေပုဒ်မ ၈၅ ပါ ပြဌာန်းချက် များကို လိုက်နာရန် တာဝန်ရှိသည်။
- ၁၀။ အစုရှယ်ယာများ လွှဲပြောင်းရန် တင်ပြချက်ကို မည်သည့် အကြောင်းပြချက်မျှ မပေးဘဲ ဒါရိုက်တာ အဖွဲ့သည် ၎င်းတို့၏ပြည်စုံ၍ ချုပ်ချယ်ခြင်းကင်းသော ဆင်ခြင်တွက်ဆမှုဖြင့် မှတ်ပုံတင်ရန် ငြင်းဆိုနိုင်သည်။

ဒါရိုက်တာများ၏ ဆောင်ရွက်ချက်များ

- ၁၁။ ဒါရိုက်တာများသည် ၎င်းတို့သင့်လျော်သည် ထင်မြင်သည့်အတိုင်း လုပ်ငန်းဆောင်ရွက်ရန် တွေ့ဆုံ ဆွေးနွေးခြင်း၊ အစည်းအဝေးရွှေ့ဆိုင်းခြင်း၊ အချိန်မှန်စည်းဝေးခြင်း၊ အစည်းအဝေးအထမြောက်ရန် အနည်းဆုံး ဒါရိုက်တာဦးရေ သတ်မှတ်ခြင်းတို့ကို ဆောင်ရွက်နိုင်သည်။ ယင်းသို့ မသတ်မှတ်ပါက ဒါရိုက်တာနှစ်ဦး တက်ရောက်လျှင် အစည်းအဝေးထမြောက်ရမည်။ အစည်းအဝေးတွင် မည်သည့်ပြဌာနမဆို ပေါ်ပေါက်ပါက မန်နေဂျင်းဒါရိုက်တာ၏ အဆုံးအဖြတ်သည် အတည်ဖြစ်ရမည်။ မည်သည့် ကိစ္စများကိုမဆို မဲခွဲဆုံးဖြတ်ရာတွင် မဲအရေအတွက်တူနေပါက သဘာပတိသည် ဒုတိယမဲ သို့မဟုတ် အနိုင်မဲကို ပေးနိုင်သည်။
- ၁၂။ ဒါရိုက်တာများ၏ အစည်းအဝေးကို မည်သည့်ဒါရိုက်တာကမဆို အချိန်မရွေး ခေါ်နိုင်သည်။

၁၃။ ဒါရိုက်တာအားလုံးက လက်မှတ်ရေးထိုးထားသော ရေးသားထားသည့်ဆုံးဖြတ်ချက် တစ်ရပ်သည် နည်းလမ်းတကျ ခေါ်ယူကျင်းပသော အစည်းအဝေးက အတည်ပြုသည့် ဆုံးဖြတ်ချက်ကိုသို့ပင် ကိစ္စအားလုံးအတွက် အကျိုးသက် ရောက်စေရမည်။

ဒါရိုက်တာများ၏ လုပ်ပိုင်ခွင့်နှင့်တာဝန်များ

၁၄။ မြန်မာနိုင်ငံ ကုမ္ပဏီများအက်ဥပဒေ နောက်ဆက်တွဲဇယားပုံစံ(က)ပါ စည်းမျဉ်းအပိုဒ် ၇၁ တွင် ပေးအပ်ထားသော အထွေထွေ အာဏာများကို မထိခိုက်စေဘဲ ဒါရိုက်တာများသည် အောက်ဖော်ပြပါ အာဏာများ ရှိရမည်ဟု အတိအလင်း ထုတ်ဖော်ကြေညာသည်။ အာဏာဆိုသည်မှာ -

- (၁) ဒါရိုက်တာများက သင့်လျော်သည်ဟုယူဆသော တန်ဖိုးနှင့်စည်းကမ်းများ၊ အခြေအနေများ သတ်မှတ်၍ ကုမ္ပဏီကရယူရန် အာဏာရှိသည့် မည်သည့်ပစ္စည်း၊ အခွင့်အရေးများ၊ အခွင့်အလမ်းများကိုမဆို ဝယ်ယူရန် သို့မဟုတ် အခြာနည်းလမ်းများဖြင့် ရယူပိုင်ဆိုင်ရန်အပြင် ကုမ္ပဏီက ပိုင်ဆိုင်ခွင့်ရှိသော မည်သည့်ပစ္စည်း၊ အခွင့်အရေးများ၊ အခွင့်အလမ်းများကိုမဆို သင့်တော်သောစည်းကမ်းချက်များ သတ်မှတ်၍ရောင်းချခြင်း၊ အမှားချခြင်း၊ စွန့်လွှတ်ခြင်း၊ သို့မဟုတ် အခြားနည်းလမ်းများဖြင့် ဆောင်ရွက်ခြင်းတို့ကိုပြုလုပ်ရန်။
- (၂) သင့်လျော်သော စည်းကမ်းသတ်မှတ်ချက်များဖြင့် ငွေကြေးများကို ချေးငှားရန် သို့မဟုတ် အဆိုပါချေးငှားသော ငွေကြေးများကို ပြန်လည်ပေးဆပ်ရန်အတွက် အာမခံများထားရှိရန်အပြင်၊ အထူးသဖြင့် ဤကုမ္ပဏီ၏ ဒီဘင်ချာများ၊ ဒီဘင်ချာစတော့(စ်)များ၊ ခေါ်ယူခြင်းမပြုရသေးသော ရင်းနှီးငွေများအပါအဝင် ယခုလက်ရှိနှင့် နောင်ရှိမည့်ပစ္စည်းများအားလုံး သို့မဟုတ် တစ်စိတ်တစ်ဒေသကိုအပေါင်ပြု၍ ထုတ်ဝေရန်။
- (၃) ဤကုမ္ပဏီ ရယူထားသော အခွင့်အရေးများ၊ သို့မဟုတ် ဝန်ဆောင်မှုများအတွက် အားလုံး သို့မဟုတ် တစ်စိတ်တစ်ဒေသကို ငွေကြေးအားဖြင့် ပေးချေရန်၊ သို့မဟုတ် အစုရှယ်ယာများ၊ ငွေချေးစာချုပ်များ၊ ဒီဘင်ချာများ သို့မဟုတ် ဤကုမ္ပဏီ၏ အခြားသော အာမခံစာချုပ်များကို ထုတ်ပေးရန်၊ ထို့အပြင် အဆိုပါ အစုရှယ်ယာများထုတ်ပေးရာ၌ ငွေအပြည့်ပေးသွင်းပြီးသော အစုရှယ်ယာအနေဖြင့် သော်လည်းကောင်း၊ တစ်စိတ်တစ်ဒေသ ပေးသွင်းပြီးသော အစုရှယ်ယာများ အနေဖြင့်သော်လည်းကောင်း သဘောတူညီသကဲ့သို့ ထုတ်ဝေပေးရန်နှင့် အဆိုပါ ငွေချေးစာချုပ်များ၊ ဒီဘင်ချာများ သို့မဟုတ် ကုမ္ပဏီ၏ အခြားသောအာမခံ စာချုပ်များဖြင့် ထုတ်ဝေပေးရာ၌ ခေါ်ဆိုခြင်း မပြုရသေးသော ရင်းနှီးငွေများ အပါဝင် ဤကုမ္ပဏီ၏ ပစ္စည်းအားလုံး သို့မဟုတ် တစ်စိတ်တစ်ဒေသကို အပေါင်ပြု၍ဖြစ်စေ ထိုကဲ့သို့ မဟုတ်ဘဲဖြစ်စေ ထုတ်ပေးရန်။
- (၄) ဤကုမ္ပဏီနှင့် ပြုလုပ်ထားသော ကန်ထရိုက်စာချုပ်များ၊ တာဝန်ယူထားသည့်လုပ်ငန်းများ ပြီးစီးအောင် ဆောင်ရွက်စေခြင်း အလို့ငှာခေါ်ယူခြင်း မပြုရသေးသော ရင်းနှီးငွေများ အပါအဝင် ဤကုမ္ပဏီ၏ ပစ္စည်းရပ်များ အားလုံး သို့မဟုတ် တစ်စိတ်တစ်ဒေသကို ပေါင်နှံ၍ သော်လည်းကောင်း၊ အပေါင်ပြု၍သော်လည်းကောင်း သို့မဟုတ် အစုရှယ်ယာများအတွက် ငွေများ တောင်းခံခေါ်ယူ၍သော်လည်းကောင်း ခွင့်ပြုရန် သို့မဟုတ် သင့်လျော်သည့်အတိုင်း ဆောင်ရွက်ရန်။
- (၅) မန်နေဂျာများ၊ အတွင်းရေးမှူးများ၊ အရာရှိများ၊ စာရေးများ၊ ကိုယ်စားလှယ်များနှင့် ဝန်ထမ်းများကို အမြဲတမ်း၊ ယာယီ သို့မဟုတ် အထူးကိစ္စရပ်များအတွက်ခန့်ထားခြင်း၊ ရပ်စဲခြင်း၊ ဆိုင်းငံ့ခြင်းများအတွက် လည်းကောင်း အဆိုပါ ပုဂ္ဂိုလ်တို့၏ တာဝန်များ၊ အာဏာများ၊ လစာငွေများ၊ အခြားငွေကြေးများကို သတ်မှတ်ရာ၌လည်းကောင်း၊ အာမခံပစ္စည်းများ တောင်းခံရာ၌လည်းကောင်း သင့်လျော်သလိုဆောင်ရွက်ရန်၊ ထို့အပြင် အဆိုပါကိစ္စရပ်များအတွက် ကုမ္ပဏီ၏ မည်သည့်အရာရှိကိုမဆို ကိစ္စရပ်အားလုံးကိုဖြစ်စေ၊ တစ်စိတ် တစ်ဒေသကိုဖြစ်စေ ဒါရိုက်တာများ၏ကိုယ်စား ဆောင်ရွက်နိုင်ရေးအတွက် တာဝန်လွှဲအပ်ရန်။
- (၆) ဤကုမ္ပဏီ၏ ဒါရိုက်တာတစ်ဦးအား ဒါရိုက်တာရာထူးနှင့် တွဲဖက်၍ မန်နေဂျင်း ဒါရိုက်တာ၊ အထွေထွေ မန်နေဂျာ၊ အတွင်းရေးမှူး သို့မဟုတ် ဌာနခွဲ မန်နေဂျာအဖြစ်ခန့်ထားရန်။
- (၇) မည်သည့် အစုရှင်ထံမှမဆို ၎င်းတို့၏အစုရှယ်ယာများအားလုံးကိုဖြစ်စေ၊ အချို့အဝက်ကိုဖြစ်စေ စွန့်လွှတ်ခြင်းအား သဘောတူညီသော စည်းကမ်းများဖြင့် လက်ခံရန်။

- (၈) ဤကုမ္ပဏီက ပိုင်ဆိုင်သော သို့မဟုတ် ပိုင်ဆိုင်ခွင့်ရှိသော သို့မဟုတ် အခြားအကြောင်းများကြောင့် ဖြစ်သော မည်သည့် ပစ္စည်းကိုမဆို ကုမ္ပဏီ၏ကိုယ်စား လက်ခံထိန်းသိမ်းထားရန်အတွက် မည်သည့်ပုဂ္ဂိုလ် သို့မဟုတ် ပုဂ္ဂိုလ်များကိုမဆို ခန့်ထားရန်နှင့် အဆိုပါ ယုံမှတ် အပ်နှံခြင်းများနှင့် ပတ်သက်၍ လိုအပ်သော စာချုပ်စာတမ်းများ ချုပ်ဆိုပြုလုပ်ရန်။
- (၉) ဤကုမ္ပဏီ၏ အရေးအရာများနှင့် စပ်လျဉ်း၍ ဤကုမ္ပဏီက ပြုလုပ်သော သို့မဟုတ် ဤကုမ္ပဏီအပေါ် သို့မဟုတ် ဤကုမ္ပဏီ၏ အရာရှိများအပေါ် ပြုလုပ်သော တရားဥပဒေအရ ခွဲဆို ဆောင်ရွက်မှုများကို တရားစွဲဆို၊ အရေးယူ၊ ခုခံကာကွယ်ရန် သို့မဟုတ် ခွင့်လွှတ်ရန်၊ ထို့အပြင် ဤကုမ္ပဏီက ရရန်ရှိသော ကြွေးမြီများနှင့် ဤကုမ္ပဏီအပေါ် တောင်းခံသော ကြွေးမြီများနှင့်ပတ်သက်၍ ပေးဆပ်ရန် အချိန်ကာလ ရွှေ့ဆိုင်းခွင့်ပြုခြင်း၊ သို့မဟုတ် နှစ်ဦးနှစ်ဖက် သဘောတူ ကျေအေးခြင်းများ ပြုလုပ်ရန်။
- (၁၀) ဤကုမ္ပဏီက ပေးရန်ရှိသော သို့မဟုတ် ရရန်ရှိသော ငွေတောင်းခံခြင်းများကို ဖြန့်ဖြေရေး ခုံသမာဓိထံသို့ ဖြေရှင်းရန်အတွက် အပ်နှံရန်အပြင် ဖြန့်ဖြေရေး ခုံသမာဓိ၏ ဆုံးဖြတ်ချက်အတိုင်းလိုက်နာဆောင်ရွက်ရန်။
- (၁၁) ဤကုမ္ပဏီက ရရန်ရှိသောတောင်းဆိုချက်၊ တောင်းခံချက်များနှင့် ကုမ္ပဏီသို့ပေးရန်ရှိသော ငွေကြေးများ အတွက်ပြေစာများ ပြုလုပ်ထုတ်ပေးခြင်း၊ လျှော်ပစ်ခြင်းနှင့် အခြားသောနည်းဖြင့်စွန့်လွှတ်ခြင်းများကို ပြုလုပ်ရန်။
- (၁၂) လူမွဲစာရင်းခံရခြင်း၊ ကြွေးမြီ မဆက်နိုင်ခြင်းကိစ္စများနှင့် ပတ်သက်၍ ကုမ္ပဏီ၏ကိုယ်စား ဆောင်ရွက်ရန်။
- (၁၃) ငွေလွှဲစာတမ်းများ၊ ချက်လက်မှတ်များ၊ ဝန်ခံကတိစာချုပ်များ ထပ်ဆင့်လက်မှတ်ရေးထိုးခြင်းများ၊ လျှော်ပစ်ခြင်းများ၊ ကန်ထရိုက် စာချုပ်များနှင့်စာရွက်စာတမ်းများကို ကုမ္ပဏီ၏ ကိုယ်စားမည်သူက လက်မှတ် ရေးထိုးခွင့်ရှိသည်ကို စိစစ်သတ်မှတ်ရန်။
- (၁၄) ဒါရိုက်တာများက သင့်လျော်သည်ဟု ယူဆပါက သင့်လျော်လျှောက်ပတ်သောနည်းလမ်းများဖြင့် လတ်တလော အသုံးပြုရန် မလိုသေးသော ကုမ္ပဏီပိုင် ငွေများကို အာမခံပစ္စည်း ပါသည်ဖြစ်စေ၊ မပါသည်ဖြစ်စေ ရင်းနှီးမြှုပ်နှံ ထားရန်နှင့် စီမံခန့်ခွဲထားရန်၊ ထို့အပြင် အချိန်ကာလအားလျော်စွာ မြှုပ်နှံထားသောငွေကို ပြန်လည်ရယူရန်နှင့် ပြင်ဆင်ပြောင်းလွှဲရန်။
- (၁၅) ဤကုမ္ပဏီ၏ အကျိုးအတွက် ငွေကြေးစိုက်ထုတ် ကုန်ကျခံထားသော ဒါရိုက်တာ သို့မဟုတ် အခြား ပုဂ္ဂိုလ်များက ကုမ္ပဏီ၏ (လက်ရှိနှင့် နောင်တွင်ရှိမည့်) ပစ္စည်းများကို ဤကုမ္ပဏီ၏ အမည်ဖြင့်ဖြစ်စေ၊ ဤကုမ္ပဏီ၏ ကိုယ်စားဖြစ်စေ ပေါင်နှံခြင်းကို သင့်လျော်သည်ဟု ယူဆပါက ဆောင်ရွက်ခွင့်ပြုရန်၊ အဆိုပါ ပေါင်နှံခြင်းဆိုရာ၌ ရောင်းချနိုင်သည့် အာဏာနှင့် အခြားသော သဘောတူညီထားသည့် တရားဝင်သဘော တူညီချက်များနှင့် ဥပဒေပြဌာန်းချက်များပါဝင်သည်။
- (၁၆) ဤကုမ္ပဏီကခန့်အပ်ထားသောမည်သည့်အရာရှိသို့မဟုတ်ပုဂ္ဂိုလ်ကိုမဆိုအတိအကျဆောင်ရွက်ခဲ့သည့်လုပ်ငန်း သို့မဟုတ် ဆောင်ရွက်မှုတစ်ခုအတွက် ရရှိသောအမြတ်ငွေမှ ကော်မရှင်ပေးခြင်း သို့မဟုတ် ကုမ္ပဏီ၏အထွေထွေ အမြတ်အစွန်းမှ ခွဲဝေပေးခြင်းများပြုလုပ်ရန်နှင့် အဆိုပါကော်မရှင်များ အမြတ်များခွဲဝေပေးခြင်း စသည်တို့ကို ဤကုမ္ပဏီ၏လုပ်ငန်းကုန်ကျစရိတ် တစ်စိတ်တစ်ဒေသအဖြစ် သတ်မှတ်ရန်။
- (၁၇) ဤကုမ္ပဏီ၏ လုပ်ငန်းများ၊ အရာရှိများ၊ ဝန်ထမ်းများနှင့် အစုရှင်များအတွက် ထုတ်ပြန်ထားသော စည်းမျဉ်းများ၊ စည်းကမ်းချက်များ၊ စည်းကမ်းဥပဒေများကို အခါအားလျော်စွာ သတ်မှတ်ခြင်း၊ ပြင်ဆင်ခြင်း၊ ဖြည့်စွက်ခြင်းများ ဆောင်ရွက်ရန်။
- (၁၈) ဤကုမ္ပဏီ၏ လုပ်ငန်းအတွက် ဤကုမ္ပဏီ၏ အမည်ဖြင့်ဖြစ်စေ၊ ဤကုမ္ပဏီ၏ ကိုယ်စားဖြစ်စေ လိုအပ်သည်ဟု ယူဆလျှင် ညှိနှိုင်းဆွေးနွေးခြင်းနှင့် ကန်ထရိုက်စာချုပ် ချုပ်ဆိုခြင်းများကို ပြုလုပ်ရန်၊ ဖျက်သိမ်းရန်နှင့် ပြင်ဆင်ရန်အပြင် အဆိုပါ ဆောင်ရွက်ချက် စာချုပ်များနှင့် ကိစ္စရပ်များကိုလည်းကောင်း၊ ၎င်းတို့နှင့် စပ်လျဉ်းသော ကိစ္စရပ်များကိုလည်းကောင်း လုပ်ကိုင်ဆောင်ရွက်ရန်။
- (၁၉) ဒါရိုက်တာများက သင့်လျော်လျှောက်ပတ်သည်ဟု ယူဆပါက ကုမ္ပဏီ၏ စီးပွားရေးလုပ်ငန်းတွင် အကျိုးရှိ စေရန်အတွက် မည်သည့်ပြည်တွင်းပြည်ပ ပုဂ္ဂိုလ်၊ စီးပွားရေး အဖွဲ့အစည်း၊ ကုမ္ပဏီ သို့မဟုတ် ဘဏ် သို့မဟုတ် ငွေကြေးအဖွဲ့အစည်းထံမှ မဆို ငွေချေးယူရန်။

အထွေထွေအစည်းဝေးကြီးများ

- ၁၅။ ကုမ္ပဏီကိုဥပဒေအရ ဖွဲ့စည်းတည်ထောင်ပြီးသည့်နေ့မှ တစ်ဆယ့်ရှစ်လအတွင်း အထွေထွေသင်းလုံးကျွတ် အစည်းအဝေးကြီး ကိုကျင်းပရမည်။ ထို့နောက် ဒါရိုက်တာအဖွဲ့က သတ်မှတ်ပေးသည့် အချိန်နှင့် နေရာများတွင် ပြက္ခဒိန်နှစ်တစ်နှစ်လျှင် အနည်းဆုံးတစ်ကြိမ် (နောက်ဆုံးကျင်းပသည့် အထွေထွေအစည်းဝေးကြီးနှင့်တစ်ဆယ့်ငါးလတက်မပိုသည့် အချိန်၌) ကျင်းပရမည်။ သင်းလုံးကျွတ် အစည်းအဝေးစတင်၍ လုပ်ငန်းအတွက် ဆွေးနွေးချိန်တွင် အစည်းအဝေးအထမြောက်ရန် သတ်မှတ်သည့်အစုရှင်အရေအတွက် မတတ်ရောက်သော မည်သည့်သင်းလုံးကျွတ် အစည်းအဝေးတွင် မဆို လုပ်ငန်းနှင့် ပတ်သက်၍ ဆုံးဖြတ်ဆောင်ရွက်ခြင်းမပြုရ။ ဤတွင်အခြားနည်း သတ်မှတ်ပြဌာန်းခြင်းမရှိလျှင် ထုတ်ဝေထားသည့် မ,တည် ရင်းနှီးငွေ အစုရှယ်ယာများ၏ ငါးဆယ်ရာခိုင်နှုန်းထက်မနည်း ပိုင်ဆိုင်ကြသည့် (နှစ်ဦးထက်မနည်းသော) အစုရှင်များ ကိုယ်တိုင်တတ်ရောက်လျှင် လုပ်ငန်းကိစ္စအားလုံး ဆောင်ရွက်ရန်အတွက် အစည်းအဝေးအထမြောက်သည်ဦးရေ ဖြစ်သည်။ အကယ်၍ ကုမ္ပဏီတွင် အစုရှင်အရေအတွက် နှစ်ဦးတည်းသာရှိသည့် ကိစ္စတွင်မူ ထိုနှစ်ဦးတည်းသည်ပင်လျှင် အစည်းအဝေးအထမြောက်ရန် သတ်မှတ်သည့် အရေအတွက်ဖြစ်စေရမည်။

အမြတ်ဝေစုများ

- ၁၆။ သင်းလုံးကျွတ်အစည်းအဝေးတွင် ဤကုမ္ပဏီ၏ အစုရှင်များအားခွဲဝေပေးမည့် အမြတ်ဝေစုကို ကြေညာရမည်။ သို့ရာတွင် အမြတ်ဝေစုသည် ဒါရိုက်တာများက ထောက်ခံသော ငွေပမာဏထက် မကျော်လွန်စေရ။ သက်ဆိုင်ရာနှစ်၏အမြတ်ပမာဏ သို့မဟုတ် အခြားမခွဲဝေရသေးသည့် အမြတ်ပမာဏမှအပ အမြတ်ဝေစုကို ခွဲဝေပေးရ။

ရုံးဝန်ထမ်းများ

- ၁၇။ ကုမ္ပဏီသည် လုပ်ငန်းရုံးတစ်ခုကို ဖွင့်လှစ်၍ ဆောင်ရွက်မည်ဖြစ်ပြီး အရည်အချင်း ပြည့်မီသူပုဂ္ဂိုလ်တစ်ဦးအား အထွေထွေမန်နေဂျာအဖြစ် ခန့်အပ်ရန်နှင့် အခြားအရည်အချင်း ပြည့်မီသူများအား ရုံးဝန်ထမ်းများအဖြစ် ခန့်အပ်မည် ဖြစ်သည်။ လစာ၊ ခရီးသွားလာစရိတ်နှင့် အခြားအသုံးစရိတ်များကဲ့သို့သော ဉာဏ်ပူဇော်ခများနှင့် အခကြေးငွေ များကို ဒါရိုက်တာအဖွဲ့က သတ်မှတ်မည်ဖြစ်ပြီး ၎င်းသတ်မှတ်ချက်များကို သင်းလုံးကျွတ် အစည်းအဝေးက အတည်ပြုရမည်။ အထွေထွေမန်နေဂျာသည် လုပ်ငန်းရုံး၏ ထိရောက်စွာလုပ်ငန်း လည်ပတ်မှုအားလုံးအတွက် တာဝန်ရှိစေရမည်ဖြစ်ပြီး မန်နေဂျင်း ဒါရိုက်တာအားတာဝန်ခံ၍ ဆောင်ရွက်ရမည်။

ငွေစာရင်းများ

- ၁၈။ ဒါရိုက်တာများသည် သင့်လျော်သည့် ငွေစာရင်းစာအုပ်များကို အောက်ဖော်ပြပါ သတ်မှတ်ချက်များနှင့်အညီ ထားသို ထိန်းသိမ်းဆောင်ရွက်ရမည်။
- (၁) ကုမ္ပဏီ၏ရငွေ၊ သုံးငွေများ၏ပမာဏနှင့် ၎င်းရငွေ၊ သုံးငွေများဖြစ်ပေါ်ခြင်းနှင့်စပ်လျဉ်းသည့်အကြောင်းကိစ္စများ။
 - (၂) ကုမ္ပဏီ၏ကုန်ပစ္စည်းများ ရောင်းချခြင်းနှင့် ဝယ်ယူခြင်းများ။
 - (၃) ဤကုမ္ပဏီ၏ရရန်ပိုင်ခွင့်နှင့် ပေးရန်တာဝန်များ။
- ၁၉။ ငွေစာရင်းစာအုပ်အားလုံးကို ဤကုမ္ပဏီ၏ မှတ်ပုံတင်ထားသော လုပ်ငန်းရုံး သို့မဟုတ် ဒါရိုက်တာများကသင့်လျော် သည်ဟုထင်မြင်ယူဆသော အခြားနေရာတွင် သိမ်းဆည်းထားရမည်ဖြစ်ပြီး ရုံးချိန်အတွင်း၌ ဒါရိုက်တာများက စစ်ဆေးနိုင်ရန် ပြသထားရမည်။

စာရင်းစစ်

- ၂၀။ စာရင်းစစ်များကို ခန့်အပ်ထားရမည်။ ၎င်းစာရင်းစစ်များ၏ တာဝန်သည် မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေ သို့မဟုတ် အခါအားလျော်စွာ ပြင်ဆင်သတ်မှတ်သည့် စည်းမျဉ်း စည်းကမ်းများနှင့် လိုက်လျောညီထွေ ဖြစ်ရမည်။

နိတစ်စာ

၂၁။ ဤကုမ္ပဏီသည် မည်သည့်အစုရှင်ထံသို့မဆို နိတစ်စာကို လက်ရောက်ပေးအပ်ခြင်း သို့မဟုတ် နိတစ်စာပါသော စာကို စာတိုက်ခ ကြိုတင်ပေးထား၍ ၎င်းအစုရှင်ထံ မှတ်ပုံတင်လိပ်စာအတိုင်း စာတိုက်မှတစ်ဆင့် လိပ်မူပေးပို့ခြင်းအားဖြင့် ပေးပို့နိုင်သည်။

တံဆိပ်

၂၂။ ဒါရိုက်တာများသည် တံဆိပ်ကို လုံခြုံစွာထိန်းသိမ်းထားရန်အတွက် စီမံဆောင်ရွက်ရမည်။ ထိုတံဆိပ်ကို ဒါရိုက်တာများက ကြိုတင်ပေးအပ်ထားသည့် ခွင့်ပြုချက်ဖြင့်မှတစ်ပါး၊ ထို့အပြင် အနည်းဆုံး ဒါရိုက်တာတစ်ဦး ရှေ့မှောက်တွင်မှ တစ်ပါး မည်သည့်အခါမျှမသုံးရ။ တံဆိပ်ရှိကနိပ်ထားသည့် စာရွက်စာတမ်းတိုင်းတွင် ထိုဒါရိုက်တာက လက်မှတ်ရေးထိုးရမည်။

လျော်ကြေး



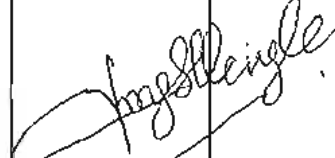



၂၃။ မြန်မာနိုင်ငံကုမ္ပဏီများ အက်ဥပဒေ ပုဒ်မ ၈၆ (ဂ) တွင် ဖော်ပြပါရှိသည့် ပြဌာန်းချက်များ၊ လက်ရှိတရားဝင်တည်ဆဲ ဥပဒေပြဌာန်းချက်များနှင့် မဆန့်ကျင်စေဘဲ ကုမ္ပဏီ၏ ဒါရိုက်တာ၊ စာရင်းစစ်၊ အတွင်းရေးမှူး သို့မဟုတ် အခြားအရာရှိ တစ်ဦးဦးမှာ မိမိ၏ တာဝန် ဝတ္တရားများကို ဆောင်ရွက်ရာ၌ဖြစ်စေ၊ ထိုတာဝန် ဝတ္တရားများနှင့် စပ်လျဉ်း၍ဖြစ်စေ ကျခံခဲ့ရသည့်စရိတ်များ၊ တောင်းခံငွေများ၊ ဆုံးရှုံးငွေများ၊ ကုန်ကျငွေများနှင့် ကြေးမြီတာဝန်များအတွက် ကုမ္ပဏီထံမှ လျော်ကြေးရထိုက်ခွင့်ရှိစေရမည်။

ဖျက်သိမ်းခြင်း

၂၄။ ကုမ္ပဏီ၏ အထွေထွေအစည်းအဝေး ဆုံးဖြတ်ချက်ဖြင့် ကုမ္ပဏီအား ဖျက်သိမ်းနိုင်သည်။ ယင်းသို့ ဖျက်သိမ်းရာတွင် မြန်မာနိုင်ငံကုမ္ပဏီများ အက်ဥပဒေများနှင့် ယင်းဥပဒေများအား အခါအားလျော်စွာ ပြင်ဆင်ပြောင်းလဲထားသည့် တရားဥပဒေများတွင် ပါဝင်သည့် စည်းမျဉ်းများအတိုင်း လိုက်နာပြုလုပ်ရမည်။



အောက်တွင် အမည်၊ နိုင်ငံသား၊ နေရပ်နှင့် အကြောင်းအရာစုံလင်စွာပါသော ဇယားတွင် လက်မှတ် ရေးထိုးသူ ကျွန်ုပ်တို့ ကိုယ်စီကိုယ်ငှ သည် ဤသင်းဖွဲ့မှတ်တမ်းအရ ကုမ္ပဏီတစ်ခုဖွဲ့စည်းရန် လိုလားသည့် အလျောက် ကျွန်ုပ်တို့၏ အမည်အသီးသီးနှင့် လွှဲပြောင်းပေးသော အစုရှယ်ယာများကို ကုမ္ပဏီ၏ ပထမဦးဆုံးအကြိမ်တွင် ထည့်ဝင်ရယူကြရန် သဘောတူကြပါသည်။

စဉ်	အစုထည့်ဝင်သူများ၏ အမည်၊ နေရပ်လိပ်စာနှင့် အလုပ်အကိုင်	နိုင်ငံသားနှင့် အမျိုးသား မှတ်ပုံတင်အမှတ်	ဝယ်ယူသော အစုရှယ်ယာ ဦးရေ	ထိုးပြုလက်မှတ်
၁	နေရှင်နယ် အင်ဖရာစထရက်ဥာ ဟိုးလ်ဒင်း(စ်) ကုမ္ပဏီလီမိတက် အမှတ် - ၃၆၊ သိမ်မြူလမ်း၊ ပုဇွန်တောင်မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။ ကိုယ်စားပြုသူ - ဦးမောင်ကျော် (ကုန်သည်) အမှတ်-၈/၄၊ မွန်မြတ်မေတ္တာ ဘိမ်ရာမင်ရွှေညောင်လမ်း၊ တာမွေမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။ ဦးသန်းမြင့် (ကုန်သည်) အမှတ် - ၄၅/အော၊ ဝိသိင်္ဃ၊ ပြည်လမ်း၊ လှိုင်မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။	ကုမ္ပဏီမှတ်ပုံတင်အမှတ် ၅၅၁၇/၂၀၁၄ - ၂၀၁၅ ၁၂/လသန (နိုင်) ၀၁၈၁၇၄ ၁၂/လမတ (နိုင်) ၀၂၇၃၇၂ ကုမ္ပဏီမှတ်ပုံတင်အမှတ် ၆၆၈/၂၀၁၁-၂၀၁၂ ၁၂/လမတ (နိုင်) ၀၂၅၈၉၇ ၁၂/သဃက (နိုင်) ၁၈၅၃၉၅	၈၁, ၀၀၀ ၅၅,၅၀၀ ၁၃,၅၀၀	     
၂	မြန်မာစာတုဝေနှင့်စက်ပစ္စည်းကုမ္ပဏီလီမိတက် ကိုယ်စားပြုသူ - ဦးအောင်လှိုင်ဦး (ကုန်သည်) အမှတ်-၁၁၂၀-၁၁၂၁၊ သုမင်္ဂလာလမ်း၊ ၁၆/၄ ရပ်ကွက်၊ သယ်န်းကျွန်းမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။ ဒေါ်နီနီစုဘောင် (ကုန်သည်) အမှတ်-၁၁၂၀-၁၁၂၁၊ သုမင်္ဂလာလမ်း၊ ၁၆/၄ ရပ်ကွက်၊ သယ်န်းကျွန်းမြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။			
၃	SEPCOIII Electric Power Construction Co.,Ltd No.882-1 Tong'an Road, Laoshan District, Qingdao, China. Represented by Mr. Zhang Yushi (Businessman) No. 882-1 Tong'an Road, Laoshan District, Qingdao, China.	Incorporated in the People Republic of China 913702121654224203 Passport No. G49052786		

ရန်ကုန်၊ နေ့စွဲ၊ ၂၀၁၈ ခုနှစ်၊ ဇွန် လ၊ ၂၇ ရက်၊
အထက်ပါလက်မှတ်ရှင်များသည် ကျွန်ုပ်တို့ ရှေ့မှောက်တွင်
လက်မှတ်ရေးထိုးကြပါသည်။

ရက်စွဲ: BA, RL
အများလွှတ်တော်ရှေ့နေ [၁၆၄၇၆၃]

THE MYANMAR COMPANIES ACT

PRIVATE COMPANY LIMITED BY SHARES

Memorandum Of Association

OF

POWERGEN KYAUKSE COMPANY LIMITED



- I. The name of the Company is **POWERGEN KYAUKSE COMPANY LIMITED.**
- II. The registered office of the Company will be situated in the Republic of the Union of Myanmar.
- III. The objects for which the Company is established are as on the next page.
- IV. The liability of the members is limited.
- V. The authorized capital of the Company is US Dollar 1,000,000.00/- (US Dollar One Million Only) divided into 1,000,000 shares of USD 1.00 /- (US Dollar One Only) each, with power in General Meeting either to increase, reduce or alter such capital from time to time in accordance with the regulations of the Company and the legislative provisions for the time being in force in this behalf.

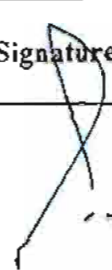

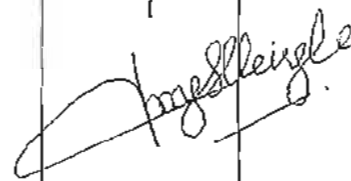
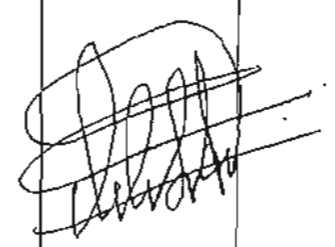
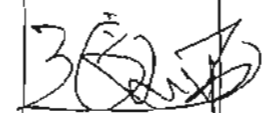
VI. The Objectives for which the Company is established are

- Generating electricity
- Distributing electricity
- Services regarding with generation and distribution of electricity
- Importation, storage and utilization of Liquefied Petroleum Gas (LPG), fuel oil and any other energy products, etc for generation and distribution of electricity

VII. To borrow money for the benefit of the Company's business from any person, firm, company, bank or financial organization in the manner that the Company shall think fit.

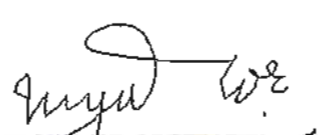
PROVISO:- Provided that the Company shall not exercise any of the above objects whether in the Republic of the Union of Myanmar or elsewhere, save in so far as it may be entitled so as to do so in accordance with the Laws, Orders and Notifications in force from time to time and then only subject to such permission and/or approval as may be prescribed by the Laws, Orders and Notifications of the Republic of the Union of Myanmar for the time being in force.

We, the several persons, whose names, nationalities, addresses and descriptions are subscribed below, are desirous of being formed into a Company in pursuance of this Memorandum of Association, and we respectively agree to take the number of shares in the capital of the Company set opposite our respective names.

Sr. No	Name, Address and Occupation of Subscribers	Nationality & N.R.C No.	Number of shares taken	Signatures
1.	National Infrastructure Holdings Company Limited No. 36, Thein Phyu Road, Pazundaung Township, Yangon. Represented by U Maung Kyay (Merchant) No.(C-4), Mon Myat Myittar Residence, Pin Shwe Nyaung Street, Tamwe Township, Yangon. U Than Myint (Merchant) No.45/A, 6 1/2 miles, Pyay Road, Hlaing Township, Yangon.	Incorporated in Myanmar 5517/2014 - 2015 12/ LaThaNa (Naing) 018174 12/LaMaTa (Naing) 027772	81,000	 
2.	Myanmar Chemical and Machinery Company Limited No. 1120/1121, Thu Mingalar Street, (16/4) Ward, Thingangyun Township, Yangon. Represented by U Aung Hlaing Oo (Merchant) No. 1120-1121, Thu Mingalar Street, 16/4, Ward, Thingangyun Township, Yangon Daw Noe Noe Su Aung (Merchant) No. 1120-1121, Thu Mingalar Street, 16/4, Ward, Thingangyun Township, Yangon.	Incorporated in Myanmar 668/2001 - 2002 12/LaMaTa (Naing) 025897 12/ThaGaKa (Naing) 185395	55,500	 
3.	SEPCOIII Electric Power Construction Co., Ltd No.882-1 Tong'an Road, Laoshan District, Qingdao, China. Represented by Mr. Zhang Yushi (Businessman) No. 882-1 Tong'an Road, Laoshan District, Qingdao, China.	Incorporated in the People Republic of China 913702121654224203 Passport No. G49052786	13,500	

Yangon Dated the 27 day of Jun, 2018

It is hereby certified that the persons mentioned above
Put their signatures in my presence.


Myat Toe BA, RL
Advocate [No.4763]

THE MYANMAR COMPANIES ACT
PRIVATE COMPANY LIMITED BY SHARES

Articles Of Association

OF

POWERGEN KYAUKSE COMPANY LIMITED



1. The regulations contained in Table "A" in the First Schedule to the Myanmar Companies Act shall apply to the Company save in so far as such regulations which are inconsistent with the following Articles. The compulsory regulations stipulated in Section 17 (2) of the Myanmar Companies Act shall always be deemed to apply to the Company.

PRIVATE COMPANY

2. The Company is to be a Private Company and accordingly following provisions shall have effect: -
 - (a) *The number of members of the Company, exclusive of persons who are in the employment of the Company, shall be limited to fifty.*
 - (b) *Any invitation to the public to subscribe for any share or debenture or debenture stock of the Company is hereby prohibited.*

CAPITAL AND SHARES

3. The authorized capital of the Company is USD 1,000,000 /- (US Dollar One Million Only) divided into 1,000,000 shares of USD 1.00/- (US Dollar One Only) each, with power in General Meeting either to increase, reduce or alter such capital from time to time in accordance with the regulations of the Company and the legislative provisions for the time being in force in this behalf.
4. Subject to the provisions of the Myanmar Companies Act the shares shall be under the control of the Directors, who may allot or otherwise dispose of the same to such persons and on such terms and conditions as they may determine.

(5)

5. The certificate of title to share shall be issued under the Seal of the Company, and signed by the General Manager or some other persons nominated by the Board of Directors. If the share certificate is defaced, lost or destroyed, it may be renewed on payment of such fee, if any, and on such terms, if any, as to evidence and indemnity as the Directors may think fit. The legal representative of a deceased member shall be recognized by the Directors.
6. The Directors may from time to time make call upon the members in respect of any money unpaid on their shares, and each member shall be liable to pay the amount of every call so made upon him to the persons, and at the times and places appointed by the Directors. A call may be made payable by installments or may be revoked or postponed as the Directors may determine.

DIRECTORS

7. Unless otherwise determined by a General Meeting the number of Directors shall not be less than (2) and not more than (20)

The First Directors shall be:-

- (1) U Maung Kyay
- (2) U Than Myint
- (3) U Aung Hlaing Oo
- (4) Daw Noe Noe Su Aung
- (5) Mr. Zhang Yushi

1. The Directors may from time to time appoint one of their body to the office of the Managing Director for such terms and at such remuneration as they think fit and he shall have all the powers delegated to him by the Board of Directors from time to time.
2. The qualification of a Director shall be the holding of at least (-) shares in the Company in his or her own name and it shall be his duty to comply with the provision of Section (85) of the Myanmar Companies Act.
3. The Board of Directors may in their absolute and uncontrolled discretion refuse to register any proposed transfer of shares without assigning any reason.

PROCEEDINGS OF DIRECTORS

4. The Directors may meet together for the dispatch of business, adjourn and otherwise regulate their meetings as they think fit and determine the quorum necessary for the transaction of business. Unless otherwise determined, two shall form a quorum. If any question arising at any meeting the Managing Director's decision shall be final. When any matter is put to a vote and if there shall be an equality of votes, the Chairman shall have a second or casting vote.
5. Any Director may at any time summon a meeting of Directors.

13. A resolution in writing signed by all the Directors shall be as effective for all purposes as a resolution passed out at meeting of the Directors, duly called, held and constituted.

POWERS AND DUTIES OF DIRECTORS

14. Without prejudice to the general power conferred by Regulation 71 of the Table "A" of the Myanmar Companies Act, it is hereby expressly declared that the Directors shall have the following powers, that is to say power: -

- (1) To purchase or otherwise acquire for the Company any property, rights or privileges which the Company is authorized to acquire at such price, and generally on such terms and conditions as they think fit; also to sell, lease, abandon or otherwise deal with any property, rights or privileges to which the Company may be entitled, on such terms and conditions as they may think fit.
- (2) To raise, borrow or secure the payment of such sum or sums in such manner and upon such terms and conditions in all respects as they think fit and in particular by the issue of debentures or debenture stocks of the Company charged upon all or any part of the property of the Company (both present and future) including its uncalled capital for the time being.
- (3) At their discretion, to pay for any rights acquired or services rendered to the Company, either wholly or partially in cash or in shares, bonds, debentures or other securities of the Company and any such shares may be issued either as fully paid up or with such amount credited as paid up thereon as may be agreed upon; and any such bonds, debentures or other securities may be either specifically charged upon all or any part of the property of the Company and its uncalled capital or not so charged.
- (4) To secure the fulfilment of any contract or engagement entered into by the Company by mortgage or charge upon all or any of the property of the Company and its uncalled capital for the time being or by granting calls on shares or in such manner as they may think fit.
- (5) To appoint at their discretion, remove or suspend such Managers, Secretaries, Officers, Clerks, Agents and Servants for permanent, temporary or special services as they may from time to time think fit and to determine their duties and powers and fix their salaries or emoluments and to require security in such instances in such amount as they think fit and to depute any officers of the Company to do all or any of these things on their behalf.
- (6) To appoint a Director as Managing Director, General Manager, Secretary or Departmental Manager in conjunction with his Directorship of the Company.
- (7) To accept from any member on such terms and conditions as shall be agreed on the surrender of his shares or any part thereof.

- (8) To appoint any person or persons to accept and hold in trust for the Company any property belonging to the Company or in which it is interested or for any other purposes and to execute and do all such deeds and things as may be requisite in relation to any such trust.
- (9) To institute, conduct, defend or abandon any legal proceedings by or against the Company or its officers or otherwise concerning the affairs of the Company and also to compound and allow time for payment or satisfaction of any debts due to or of any claims and demands by or against the Company.
- (10) To refer claims and demands by or against the Company to arbitration and to observe and perform the awards.
- (11) To make and give receipts, releases and other discharges for money payable to the Company and for the claims and demands of the Company.
- (12) To act on behalf of the Company in all matters relating to bankruptcy and insolvency.
- (13) To determine who shall be entitled to sign bills of exchange, cheques, promissory notes, receipts, endorsements, releases, contracts and documents for or on behalf of the Company.
- (14) To invest, place on deposit and otherwise deal with any of the moneys of the Company not immediately required for the purpose thereof, upon securities or without securities and in such manners as the Directors may think fit, and from time to time vary or realize such investments.
- (15) To execute in the name and on behalf of the Company in favour of any Director or other person who may incur or be about to incur any personal liability for the benefit of the Company, such mortgages of the Company's property (present and future) as they think fit and any such mortgage may contain a power of sale and such other powers, covenants and provisions as shall be agreed on.
- (16) To give any officer or other person employed by the Company a commission on the profits of any particular business or transaction or a share in the general profit of the Company and such commission or share of profit shall be treated as part of the working expenses of the Company.
- (17) From time to time, to make, vary and repeal bye-laws for the regulation of the business of the Company, the officers and servants or the members of the Company or any section thereof.
- (18) To enter into all such negotiations and contracts and rescind and vary all such contracts and execute and do all such acts, deeds and things in the name and on behalf of the Company as they may consider expedient for or in relation to any of the matters aforesaid or otherwise for the purposes of the Company.
- (19) To borrow money for the benefit of the Company's business from any person, firm or company or bank or financial organization of local and abroad in the manner that the Directors shall think fit.

GENERAL MEETINGS

15. A general meeting shall be held within eighteen months from the date of its incorporation and thereafter at least once in every calendar year at such time(not being more than fifteen month after the holding of the last preceding general meeting)and places as may be fixed by the Board of Directors. No business shall be transacted at any general meeting unless a quorum of members is presented at the time when the meeting proceeds to business, save as herein otherwise provided Member holding not less than 50 percent of the issued shares capital(not less than two members) personally present, shall form a quorum for all purposes. And if and when in the case of there are only two number of members in the Company, those two members shall form a quorum.

DIVIDENDS

16. The Company in general meeting may declare a dividend to be paid to the members, but no dividend shall exceed the amount recommended by the Directors. No dividends shall be paid otherwise than out of the profits of the year or any other undistributed profits.

OFFICE STAFF

17. The Company shall maintain an office establishment and appoint a qualified person as General Manager and other qualified persons as office staffs. The remunerations and allowances such as salaries, travelling allowances and other expenditures incidental to the business shall be determined by the Board of Directors, and approved by the general meeting. The General Manager shall be responsible for the efficient operation of the office in every respect and shall be held accountable at all times to the Managing Director.

ACCOUNTS

18. The Directors shall cause to be kept proper books of account with respect to : -
- (1) *all sums of money received and expended by the Company and the matters in respect of which the receipts and expenditures take place;*
 - (2) *all sales and purchases of goods by the Company;*
 - (3) *all assets and liabilities of the Company.*
19. The books of account shall be kept at the registered office of the Company or at such other place as the Directors shall think fit and shall be opened to inspection by the Directors during office hours.

AUDIT

20. Auditors shall be appointed and their duties regulated in accordance with the provisions of the Myanmar Companies Act or any statutory modifications thereof for the time being in force.

NOTICE

21. A notice may be given by the Company to any member either personally or sending it by post in a prepaid letter addressed to his registered address.

THE SEAL

22. The Directors shall provide for the safe custody of the Seal, and the Seal shall never be used except by the authority of the Directors previously given, and in the presence of one Director at least, who shall sign every instrument to which the Seal is affixed.

INDEMNITY



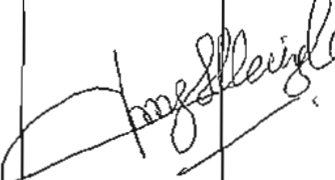
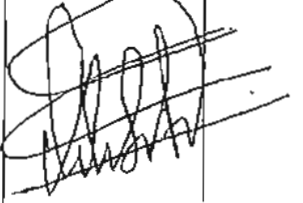

23. Subject to the provisions of Section 86 (C) of the Myanmar Companies Act and the existing laws, every Director, Auditor, Secretary or other officers of the Company shall be entitled to be indemnified by the Company against all costs, charges, losses, expenses and liabilities incurred by him in the execution and discharge of the duties or in relation thereto.

WINDING-UP

24. Subject to the provisions contained in the Myanmar Companies Act and the statutory modification thereupon, the Company may be wound up voluntarily by the resolution of General Meeting.

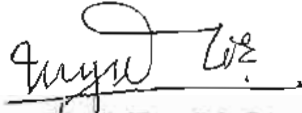


We, the several persons, whose names, nationalities, addresses and descriptions are subscribed below, are desirous of being formed into a Company in pursuance of this Memorandum of Association, and we respectively agree to take the number of shares in the capital of the Company set opposite our respective names.

Sr. No	Name, Address and Occupation of Subscribers	Nationality & N.R.C No.	Number of shares taken	Signatures
1.	National Infrastructure Holdings Company Limited No. 36, Thein Phyu Road, Pazundaung Township, Yangon. Represented by U Maung Kyay (Merchant) No.(C-4), Mon Myat Myittar Residence, Pin Shwe Nyaung Street, Tamwe Township, Yangon. U Than Myint (Merchant) No.45/A, 6 1/2 miles, Pyay Road, Hlaing Township, Yangon.	Incorporated in Myanmar 5517/2014 - 2015 12/ LaThaNa (Naing) 018174 12/LaMaTa (Naing) 027772	81,000	 
2.	Myanmar Chemical and Machinery Company Limited No.1120/1121, Thu Mingalar Street, 16/4 Ward, Thingangyun Township, Yangon. Represented by U Aung Hlaing Oo (Merchant) No. 1120-1121, Thu Mingalar Street, 16/4, Ward, Thingangyun Township, Yangon. Daw Noe Noe Su Aung (Merchant) No. 1120-1121, Thu Mingalar Street, 16/4, Ward, Thingangyun Township, Yangon.	Incorporated in Myanmar 668/2001 - 2002 12/LaMaTa (Naing) 025897 12/ThaGaKa (Naing) 185395	55,500	 
3.	SEPCOIII Electric Power Construction Co., Ltd No 882-1 Tong'an Road, Laoshan District, Qingdao, China. Represented by Mr. Zhang Yushi (Businessman) No. 882-1 Tong'an Road, Laoshan District, Qingdao, China.	Incorporated in the People Republic of China 913702121654224203 Passport No. G49052786	13,500	

Yangon Dated the 27 day of Jun , 2018

It is hereby certified that the persons mentioned above
Put their signatures in my presence.


Myat Toe BA, RL
Advocate [No.4763]

CONSORTIUM AGREEMENT

Between

National Infrastructure Holdings Company Limited

And

Tellhow International Engineering & Contracting Co., Ltd.

And

Myanmar Chemical & Machinery Company Limited

And

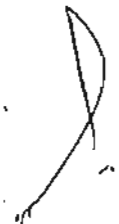
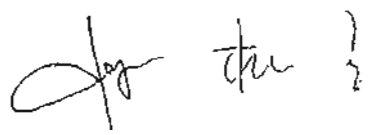
SEPCOIII Electric Power Construction Co., Ltd.

In relation to

135 MW Rental Power Project (EPGE G 02/2017-2018)

Issued by

Electric Power Generation Enterprise (EPGE)

— This Consortium Agreement (the Consortium Agreement) is made on this 6th day of March 2018.

BY AND BETWEEN

National Infrastructure Holdings Company Limited (NIHC), a company incorporated and existing under the laws of Myanmar, having its registered office at No. 36, Thein Phyu Road, Puzundaung Township, Yangon, Myanmar, duly represented herein by its authorized representative Maung Kyay;

And

Tellhow International Engineering & Contracting Co., Ltd. (Tellhow), a company incorporated and existing under the laws of People's Republic of China, having its registered office at 6FL, Block A, Tellhow Plaza, 2 Yuncheng Street, Yi-Town Economic Development Zone, Beijing duly represented herein by its authorized representative, Du Jianwei;

And

Myanmar Chemical & Machinery Company Limited (MCM), a company incorporated and existing under the laws of Myanmar, having its registered office at No. 1120-1121, Thu Mingalar St, 16/4 Ward, Thingangyun T/S, Yangon, Myanmar duly represented herein by its authorized representative, U Aung Hlaing Oo;

And

SEPCOIII Electric Power Construction Co., Ltd. (SEPCOIII), a company incorporated and existing under the laws of China, having its registered office at No. 882-L, Tong'an Road, Laoshan District, Qingdao City, P.R.C duly represented herein by its authorized representative, Wang Lina;

hereafter referred to individually as a Party and collectively as the Parties.

WHEREAS:

- A) The Parties are interested in jointly bidding for the 5-year rental power tender called by the EPGE for the Kyaukse Region, in Myanmar (EPGE G 02/2017-2018) ("Project") as members of a bidding consortium and in accordance with the terms and conditions of the bid documents in respect of the Project.
- B) The Parties now wish to enter into this Agreement to establish the rights and obligations as amongst themselves in respect of their relationship in this bidding consortium.

NOW IT IS HEREBY AGREED as follows:

1. DEFINITIONS

In this Consortium Agreement, the capitalised terms shall, unless the context otherwise requires, have the meaning ascribed thereto in the SRFP.

2. CONSORTIUM

- 2.1 The Parties do hereby irrevocably constitute a bidding team (the Consortium) for the purposes of jointly participating in the bidding process of EPGE, subject to Clause 9 below.
- 2.2 Parties hereby undertake to participate in the bidding process only through the Consortium and not individually and/or through any other consortium constituted for the Project, either directly or indirectly or through any of their affiliates.
- 2.3 It is agreed that the Proposal shall be submitted in the name of the Consortium.

3. ANCHOR MEMBER

- (a) The Consortium hereby appoints for the term of this Consortium Agreement National Infrastructure Holdings Company Limited as Anchor Member (with the meaning given to such term in the SRFP) and accordingly empowers National Infrastructure Holdings Company Limited to act on behalf of the Consortium, and to be authorized to act and receive instructions on behalf of all Consortium members, in each case in relation to the Project, until the earlier of: (i) the date on which the Project Agreements are in force and effect in accordance with their terms; or (ii) the effective date of termination of this Consortium Agreement in accordance with Clause 8 below.
- (b) The Parties agree that the Proposal shall be submitted by the Parties in the name of the Consortium and mention, in accordance with the SRFP, that National Infrastructure Holdings Company Limited is the Anchor Member and representative of the Consortium.

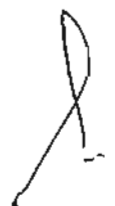

4. RESPONSIBILITY FOR THE OFFERS

Unless otherwise specified in the SRFP, the Parties shall be jointly and severally liable towards EPGE in relation to the Proposal submitted by the Parties as a Consortium.

5. SHARES IN THE CONSORTIUM

The shares of each Party in the Consortium shall be:

- (a) 24% of the consortium company shall be held by NIHC;
- (b) 51% of the consortium company shall be held by Tellhow;
- (c) 16% of the consortium company shall be held by MCM; and
- (d) 9% of the consortium company shall be held by SEPCOIII.

6. INCORPORATION OF HOLDING COMPANY

As SRFP envisages that the Successful Bidder will form a Company if selected as Winning Bidder, the Parties agree, as soon as practicable following the Consortium being designated as the Winning Bidder, to incorporate a company to hold the Parties' interests in the Company, enter into the Project Agreements and generally participate in the Project.

7. REPRESENTATION AND WARRANTIES OF THE PARTIES

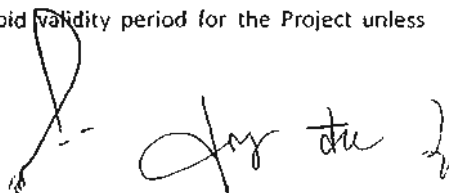
Each Party represents to the other Parties that, as of the date of this Consortium Agreement:

- (a) it is duly organised, validly existing and in good standing under the laws of its incorporation and has all requisite power and authority to enter into this Consortium Agreement;
- (b) the signature, delivery and performance by such Party of this Consortium Agreement has been authorised by all necessary and a copy of board resolution/power of attorney in favour of the person executing this Consortium Agreement for the delegation of power and authority to execute this Consortium Agreement on its behalf is annexed to this Consortium Agreement, and will not, to the best of its knowledge:
 - (i) require any consent or approval not already obtained;
 - (ii) violate any applicable law presently in effect and having applicability to it;
 - (iii) violate the memorandum and articles of association, by-laws or other applicable organisational documents thereof; or
 - (iv) violate any clearance, permit, concession, grant, license or other governmental authorisation, approval, judgement, order or decree or any mortgage agreement, indenture or any other instrument to which such Party is a party or by which such Party or any of its properties or assets are bound or that is otherwise applicable to such Party;
 - (v) the Parties or their affiliated group (consortium) shall not have any litigation with EPGE, other organizations involved in current project and other projects;
- (c) there is no litigation pending or, to the best of such Party's knowledge, threatened to which it or any of its affiliates is a party that presently affects or which would have a material adverse effect on the financial condition or prospects or business of such Party in the fulfilment of its obligations under this Consortium Agreement.

8. TERMINATION

8.1 This Consortium Agreement shall enter into effect on the date of signature by all Parties and shall continue to be valid until the first to occur of any of the following events:

- (a) EPGE definitively awards the Project to a third party;
- (b) EPGE cancels the SRFP and/or the Project;
- (c) the date falling 30 calendar days after the expiry of the bid validity period for the Project unless extended by the agreement of the Parties;

A handwritten signature in black ink, appearing to be a stylized 'S' followed by 'for the' and a flourish.

- (d) if no Project is awarded by the date falling 6 months after the date of this Consortium Agreement, unless extended by the agreement of the Parties.
- 8.2 For each Project that is awarded to the Consortium, this Consortium Agreement shall not be applicable, in respect of that Project, upon signature and entry into force and effect of the Project Agreements in respect of that Project, in accordance with their terms.
- 8.3 No Party shall be entitled to withdraw from this Consortium or this Agreement until the expiry of this Agreement as set out above.

9. MISCELLANEOUS

- 9.1 This Consortium Agreement shall be governed by Singapore law. Any matter, claim or dispute arising out of or in connection with this Agreement, whether contractual or non-contractual, is to be determined in accordance with Singapore Law.
- 9.2 Any dispute arising out of or in connection with this contract, including any question regarding its existence, validity or termination, shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre ("SIAC") in accordance with the Arbitration Rules of the Singapore International Arbitration Centre ("SIAC Rules") for the time being in force, which rules are deemed to be incorporated by reference in this clause.

The seat of the arbitration shall be Singapore. The Tribunal shall consist of three arbitrator(s). The language of the arbitration shall be English.

Arbitration proceedings and any awards subsequently made shall be kept confidential. The arbitration award shall be final and binding upon the Parties. Judgment upon the award rendered may be entered in any court having jurisdiction, or application may be made to such court for juridical recognition of the award and an order of enforcement, as the case may be. A Party may apply to any competent judicial authority for interim or conservatory relief in support of or in connection with arbitral proceedings commenced pursuant to this Clause. The application for such measures or the enforcement of such measures ordered by such judicial authority shall not be deemed an infringement or waiver of the agreement to arbitrate and shall not affect the powers of the arbitrator.

- 9.3 No Party may assign all or a portion of its interest under this Consortium Agreement to a third party without the prior written approval of the other Party.
- 9.4 This Consortium Agreement may be varied only by the agreement of the Parties in writing.
- 9.5 Nothing in this Consortium Agreement shall be construed to create an association, trust, partnership, or other fiduciary relationship between the Parties or to impose a trust or partnership duty, obligation or liability between the Parties.
- 9.6 This Agreement may be executed in counterparts with the same force and effect as if executed on a single document and all such counterparts shall constitute one and the same instrument

IN WITNESS WHEREOF, the Parties hereto have executed this Consortium Agreement on the date written above.

SIGNATORIES

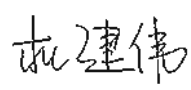
National Infrastructure Holdings Company Limited

By: 

Name: Maung Kyay

Position: Managing Director

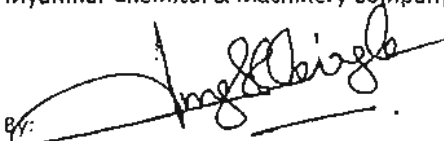
Tellhow International Engineering & Contracting Co., Ltd.

By: 

Name: Ou Jianwei

Position: Chief Engineer

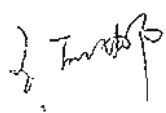
Myanmar Chemical & Machinery Company Limited

By: 

Name: U Aung Hlaing Oo

Position: Managing Director

SEPCOIII Electric Power Construction Co., Ltd.

By: 

Name: Wang Lina

Position: Chief Representative of Myanmar, Overseas Business Development

Consortium comprising of :

National Infrastructure Holdings Co., Ltd
No.36, Thein Phyu Road, Pazuntaung Township, Yangon,
Myanmar

Myanmar Chemical & Machinery Co., Ltd
No. 1120-1121, Thu Mingalar St, 16/4 Ward, Thingangyun T/S,
Yangon, Myanmar

SEPCOIII Electric Power Construction Co., Ltd
No.882-1 Tong' an Road, Laoshan District, QingDao,
People' s Republic of China

Tellhow International Engineering & Contracting Co., Ltd
#266 Huiwen Road, Xiaolan Industry Park, Nanchang,
People' s Republic of China

Date: 30 June 2018

Electric Power Generation Enterprise
Building No.27, Naypyitaw
The Republic of the Union of Myanmar

Dear Sirs

Attn : The Managing Director

Subject: 135 MW Rental Power Project (EPGE G 02/2017-2018)

Withdrawal of Tellhow International Engineering & Contracting Co., Ltd
from the Consortium

We are the Consortium comprising of Tellhow International Engineering & Contracting Co., Ltd ("Tellhow"), a company established in the People' s Republic of China, National Infrastructure Holdings Co., Ltd. ("NTHC"), Myanmar Chemical & Machinery Company Ltd. ("MCM") and SEPCOIII Electric Power Construction Co., Ltd ("SepcoIII"). We have

formed the Consortium to tender for a Gas Fired Power Plant in the Kyaukse Region, Myanmar (the "Project") to Electric Power Generation Enterprises (the "EPGE") on 28 February 2018 in respect of the 135 MW Rental Power Project (EPGE G 02/2017-2018) and have been awarded the Letter of Acceptance of the Project on May 7th, 2018.

We have met with EPGE representatives in Naypyitaw on several occasions to discuss the details of the Project. We appreciate very much the patience and attentiveness of the EPGE representatives in discussing the matter with us.

Unfortunately, due to the different understandings of the investment risks attached to the Project among the Consortium members, Tellhow has now decided to withdraw from the Consortium, and Tellhow's engagement in this Project has therefore stopped. It is therefore with much regret that we now write to officially notify you of Tellhow's withdrawal from the Consortium and the Project, which will take effect from June 30, 2018 (the "Withdrawal Date"). Therefore with immediate effect from the Withdrawal Date, Tellhow is no longer be a member of the Consortium or involved in the Project, and Tellhow will have no further rights or obligations in relation to the Project. We will resolve the formalities of Tellhow's withdrawal from the Consortium in relation to the Project, in accordance with your guidance and due procedures.

We, acting still as a consortium (ie excluding Tellhow), have mutually resolved to continue to undertake the Project until its eventual success. We will provide detailed and feasible alternative solutions and ensure the Project be completed on schedule.

We respectfully request for your acknowledgment to this notification and please update your records with respect to Tellhow's withdrawal from the Consortium.

Please let us know if you have any query.



Signature Page

For and on behalf of:
Tellhow International Engineering & Contracting Co., Ltd


Name: _____

Position: _____

For and on behalf of:
National Infrastructure Holdings Co., Ltd.

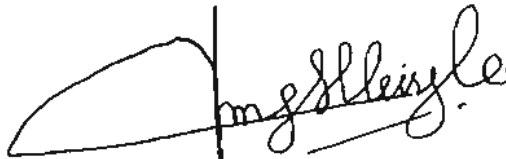




Name: **MAUNG KYAY**
Position: **MANAGING DIRECTOR**

NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD.

For and on behalf of:
Myanmar Chemical & Machinery Company Ltd.





Name: **Aung Hlaing Oo**
Position: **Managing Director**

For and on behalf of:
SEPCOIII Electric Power Construction Co., Ltd





Name: **Wang Lina**
Position: **Chief Representative of Myanmar, O&D**



ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
 အမျိုးသားစီမံကိန်းနှင့် စီးပွားရေးဖွံ့ဖြိုးတိုးတက်မှုဝန်ကြီးဌာန

000130

ကုမ္ပဏီမှတ်ပုံတင်လက်မှတ်

အမှတ် ...၅၅၁၇..... / ၂၀၁၄ - ၂၀၁၅

မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေအရ နေရှင်နယ် အင်ဖရာစထရက်ချာ ဟိုးလ်ဒင်း(စ်)
 ကုမ္ပဏီ လီမိတက်အား ပေးရန်တာဝန် ကန်သတ်ထားသော လီမိတက်
 ကုမ္ပဏီအဖြစ် ၂၀၁၅ နှစ်၊ ဖေဖော်ဝါရီလ၊ ၁၀ ရက်နေ့တွင် မှတ်ပုံတင်ခွင့်ပြုလိုက်သည်။

ညွှန်ကြားရေးမှူးချုပ်(ကိုယ်စား)

(နီလာမူ ၊ ဒုတိယညွှန်ကြားရေးမှူး)

ရင်းနှီးမြှုပ်နှံမှုနှင့်ကုမ္ပဏီများညွှန်ကြားမှုဦးစီးဌာန

THE GOVERNMENT OF THE REPUBLIC OF THE UNION OF MYANMAR
 MINISTRY OF NATIONAL PLANNING AND ECONOMIC DEVELOPMENT

CERTIFICATE OF INCORPORATION

NO. 5517 of 2014 - 2015

I hereby certify that NATIONAL INFRASTRUCTURE HOLDINGS
 COMPANY LIMITEDis this day incorporated
 under the Myanmar Companies Act and that the company is Limited.

Given under my hand at Yangon this TENTH day
 of FEBRUARY, TWO THOUSAND AND FIFTEEN.

For Director General

(Nilar Mu , Deputy Director)

Directorate of Investment and Company Administration

ကုမ္ပဏီနှင့်သက်ဆိုင်သည့်အချက်အလက်များ

- (က) အုပ်ချုပ်မှုဒါရိုက်တာအမည်၊ ဦးမောင်ကျေး(ခ)တီကာကွေး (၁၂/လသန(နိုင်)၀၁၈၁၇၄)
- (ခ) ကုမ္ပဏီ ရုံးခန်းလိပ်စာ၊ အမှတ်-၄၅/၄၆၊ ဗဟိုရံစည်အိမ်ရာ၊ လမ်းမတော်မြို့နယ်၊ ရန်ကုန်တိုင်းဒေသကြီး။
- (ဂ) ဆက်သွယ်ရန် ဖုန်းနံပါတ်၊ ၀၁-၂၂၉၂၃၄
- (ဃ) ဒါရိုက်တာများ အမည်စာရင်း (၁) ဦးသန်းမြင့်(ခ)ခေါ်တင်အိန် ၁၂/လမတ(နိုင်)၀၂၇၇၇၂

- မှတ်ချက်။
- (၁) ဤကုမ္ပဏီမှတ်ပုံတင်လက်မှတ်သည်မှတ်ပုံတင်ရက်စွဲ(၁၀-၂-၂၀၁၅)မှ (၉-၂-၂၀၂၀)ရက်နေ့အထိ(၅)နှစ်သက်တမ်းအတွက်သာ ဖြစ်သည်။ သက်တမ်း မကုန်ဆုံးမီ (၃)လအလိုတွင် သက်တမ်းတိုးရန် ရင်းနှီးမြှုပ်နှံမှုနှင့် ကုမ္ပဏီများ ညွှန်ကြားမှု ဦးစီးဌာနသို့ လျှောက်ထား ရမည်။
 - (၂) ကုမ္ပဏီ အနေဖြင့် သင်းဖွဲ့မှတ်တမ်းတွင်အဆိုပြု တင်ပြထားသော လုပ်ငန်းရည်ရွယ်ချက်များကိုသာ လုပ်ကိုင်ရမည်။
 - (၃) သင်းဖွဲ့မှတ်တမ်းပါ ရည်ရွယ်ချက်များသည် သက်ဆိုင်ရာ ပြည်ထောင်စုဝန်ကြီးဌာန၏ တည်ဆဲဥပဒေ၊ နည်းဥပဒေ၊ လုပ်ထုံးလုပ်နည်း များနှင့်အညီ ခွင့်ပြုချက် ရရှိမှသာ ဆောင်ရွက်ခွင့် ရှိမည် ဖြစ်ပါသည်။
 - (၄) လုပ်ငန်းရည်ရွယ်ချက် ပြောင်းလဲ လုပ်ကိုင်လိုပါက ပြောင်းလဲ လုပ်ကိုင်လိုသည့် လုပ်ငန်း ရည်ရွယ်ချက်များအား သင်းဖွဲ့မှတ်တမ်းတွင် ပြင်ဆင်မှတ်ပုံတင်ရန်အတွက် ဒါရိုက်တာအဖွဲ့(BOD)၏ အထူး အစည်းအဝေး ဆုံးဖြတ်ချက် မှတ်တမ်းနှင့်အတူ ရင်းနှီးမြှုပ်နှံမှုနှင့်ကုမ္ပဏီများ ညွှန်ကြားမှု ဦးစီးဌာန သို့ လျှောက်ထား ရမည်။

FORM XXVI
PARTICULARS OF DIRECTORS, MANAGERS AND MANAGING AGENTS AND OF ANY CHANGES THEREIN
(Myanmar Companies Act, See Section 87)

Name of Company : NATIONAL INFRASTRUCTURE HOLDINGS CO.,LTD.

U MAUNG KYAY @
Presented by : TEE KAR KWAY (M.D)



The Present Christian name or names of surnames	Nationality, National Registration Card No.	Usual Residential Address	Other Business Occupation	Changes
1. U MAUNG KYAY @ TEE KAR KWAY	MYANMAR 12/LA THA NA (NAING) 018174	NO. (C/4), PIN SHWE NYAUNG STREET, TAMWE KALAY WARD, TAMWE TOWNSHIP, YANGON.	MERCHANT	MANAGING DIRECTOR
2. U THAN MYINT @ KHAW TIN EAIN	MYANMAR 12/LA MA TA (NAING) 027772	NO. (45-A), PYAY ROAD, 11-WARD, HLAING TOWNSHIP, YANGON.	MERCHANT	DIRECTOR
3. U KYAW THAR OO	MYANMAR 12/LA MA TA (NAING) 001558	NO. 64, SHWE TAUNG TAN STREET, LANMADAW TSP, YANGON.	MERCHANT	APPOINTED AS DIRECTOR w.e.f (1.6.2016)
4. U KYAW MYINT OO	MYANMAR 12/LA MA TA (NAING) 003040	NO. 62, SHWE TAUNG TAN STREET, LANMADAW TOWNSHIP, YANGON.	MERCHANT	APPOINTED AS DIRECTOR w.e.f (1.6.2016)

NOTE : (1) A Complete list of the Directors or Managers or Managing Agents shown as existing in the last particulars.
(2) A note of the changes since the last list should be made in the column for "Changes" by placing against the new Director's name the word "in place of
and by writing against any former Director's name the the word "dead" "resigned" or as the case may be giving the date of change against the entry.



Dated this 1.6.2016

Form (26)

Signature

Designation

THAN MYINT
DIRECTOR
NATIONAL INFRASTRUCTURE HOLDINGS CO.,LTD.

FORM XXVI
PARTICULARS OF DIRECTORS, MANAGERS AND MANAGING AGENTS AND OF ANY CHANGES THEREIN
(Myanmar Companies Act, See Section 87)

Name of Company : NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD.

Presented by U MAUNG KYAY &
TEE KAR KWAY (M.D)



The Present Christian name or names of surnames	Nationality, National Registration Card No.	Usual Residential Address	Other Business Occupation	Changes
5. U NE LIN	MYANMAR 12/PA ZA TA (NAING) 031498	NO. (C/4), MON MYAT MYITTAR RESIDENCE, TAMWE TOWNSHIP, YANGON.	MERCHANT	APPOINTED AS DIRECTOR w.e.f (1.6.2016)
6. U YE' HTUT	MYANMAR 12/PA ZA TA (NAING) 031497	NO. (C/4), MON MYAT MYITTAR RESIDENCE, TAMWE TOWNSHIP, YANGON.	MERCHANT	APPOINTED AS DIRECTOR w.e.f (1.6.2016)
7. U THAN MYINT	MYANMAR 12/BA HA NA (NAING) 066699	ROOM. 307, BUILDING NO. D, KYAUKKASAN HOUSING TAMWE TOWNSHIP, YANGON.	MERCHANT	GENERAL MANAGER
8. DAW TAY RAIN(a) DAW AYE SAN	MYANMAR 12/XHA YA NA (NAING) 078006	NO. (C/3), PIN SEWE NYAUNG STREET, TAMWE KALAY WARD, TAMWE TOWNSHIP, YANGON.	MERCHANT	GENERAL MANAGER

NOTE : (1) A Complete list of the Directors or Managers or Managing Agents shown as existing in the last particulars.
(2) A note of the changes since the last list should be made in the column for "Changes" by placing against the new Director's name the word "in place of" and by writing against any former Director's name the word "dead" "resigned" or as the case may be giving the date of change against the entry.

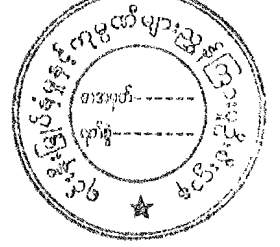
Dated this 1.6.2016.



Signature

Designation THAN MYINT
DIRECTOR

NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD



မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေ

အစုရှယ်ယာများဖြင့် ပေးရန်တာဝန် ကန့်သတ်ထားသော အများနှင့် မသက်ဆိုင်သည့် ကုမ္ပဏီ

နေရှင်နယ် အင်ဖရာစထရက်ချာ ဟိုးလ်ဒင်း(စ်) ကုမ္ပဏီလီမိတက်

၏

သင်းဖွဲ့မှတ်တမ်း

နှင့်

သင်းဖွဲ့စည်းမျဉ်းများ



THE MYANMAR COMPANIES ACT

PRIVATE COMPANY LIMITED BY SHARES

Memorandum Of Association

AND

Articles Of Association

OF

**NATIONAL INFRASTRUCTURE HOLDINGS COMPANY
LIMITED**

မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေ

အစုရှယ်ယာများဖြင့် ပေးရန်တာဝန် ကန့်သတ်ထားသော အများနှင့် မသက်ဆိုင်သည့် ကုမ္ပဏီ

နေရှင်နယ် အင်ဖရာစထရက်ချာ ဟိုးလ်ဒင်း(စ်) ကုမ္ပဏီလီမိတက်

၏

သင်းဖွဲ့မှတ်တမ်း



၁။ ကုမ္ပဏီ၏အမည်သည် နေရှင်နယ် အင်ဖရာစထရက်ချာ ဟိုးလ်ဒင်း(စ်) ကုမ္ပဏီလီမိတက် ဖြစ်ပါသည်။

၂။ ကုမ္ပဏီ၏ မှတ်ပုံတင် အလုပ်တိုက်သည်ပြည်ထောင်စု မြန်မာနိုင်ငံတော်အတွင်း တည်ရှိရမည်။

၃။ အစုဝင်များ၏ ပေးရန်တာဝန်ကို ကန့်သတ်ထားသည်။

၄။ ကုမ္ပဏီ၏ သတ်မှတ်မတည်ငွေရင်းသည် ကျပ် ၃၀၀,၀၀၀,၀၀၀,၀၀၀ /-(ကျပ်
သန်းသုံးသိန်း တိတိ) ဖြစ်၍ ငွေကျပ် ၁၀၀,၀၀၀.၀၀ /-(ကျပ်
တစ်သိန်း တိတိ) တန်အစုရှယ်ယာပေါင်း (၃၀၀၀,၀၀၀)

ခွဲထားပါသည်။ ကုမ္ပဏီ၏ ရင်းနှီးငွေကို ကုမ္ပဏီ၏ စည်းမျဉ်းများနှင့် လက်ရှိတရားဝင် တည်ဆဲဖြစ်နေသော
တရားဥပဒေ အထွေထွေ ပြဋ္ဌာန်းချက်များ နှင့်အညီ အထွေထွေ သင်းလုံးကျွတ် အစည်းအဝေး၌ တိုးမြှင့်နိုင်ခွင့်၊
လျှော့ချနိုင်ခွင့် နှင့် ပြင်ဆင်နိုင်ခွင့် အာဏာရှိစေရမည်။

(၁) ကုမ္ပဏီမှဆောင်ရွက်မည့် လုပ်ငန်းရည်ရွယ်ချက်များမှာ-

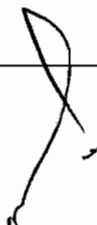

- (၁) လယ်ယာကိုင်ကျွန်းနှင့် ဥယျာဉ်ခြံမြေထွက်ကုန်ပစ္စည်းများ
- (၂) သစ်တောထွက်ပစ္စည်းနှင့် ထပ်ဆင့်တိုးတက်ဖွံ့ဖြိုးမှု သစ်အခြေခံ ကုန်ပစ္စည်းများ၊
- (၃) တိရစ္ဆာန်ထွက် ကုန်ပစ္စည်းနှင့် တိရစ္ဆာန်အစားအစာ
- (၄) ရေထွက်ကုန်ပစ္စည်းများ၊
- (၅) ဓါတ်မြေသြဇာနှင့် ပိုးသတ်ဆေးများ၊
- (၆) ဓာတုဗေဒနှင့် ဓာတ်ဆေးဆိုးဆေးများ၊
- (၇) စက်ရုံသုံးပစ္စည်းများနှင့် ကုန်ကြမ်းပစ္စည်းများ၊
- (၈) အိမ်သုံးကုန်ပစ္စည်းများ၊
- (၉) လူသုံးကုန်ပစ္စည်းများ၊
- (၁၀) ဆောက်လုပ်ရေးလုပ်ငန်းသုံး ပစ္စည်းများနှင့် သုတ်ဆေးများ
- (၁၁) လျှပ်စစ်နှင့်အီလက်ထရောနစ် ကုန်ပစ္စည်းများ၊
- (၁၂) ယာဉ်နှင့်စက်ကိရိယာနှင့် အပိုပစ္စည်းများ၊
- (၁၃) ကိရိယာတန်ဆာပလာစတစ်မျိုးမျိုး၊
- (၁၄) ဆေးနှင့်ဆေးပစ္စည်းများ၊
- (၁၅) စားသောက်ကုန်နှင့် အထွေထွေကုန်ပစ္စည်းများ၊
- (၁၆) အထည်အလိပ်နှင့် အဝတ်အထည်များ၊
- (၁၇) စက္ကူ၊ စာရေးကိရိယာနှင့် ဓာတ်ပုံပစ္စည်းများ၊
- (၁၈) ရုံးသုံးပစ္စည်းများနှင့် ပညာရေးအထောက်အကူ ပစ္စည်းများ၊
- (၁၉) လယ်ယာကိုင်ကျွန်းနှင့် ဥယျာဉ်ခြံမြေထွက် ကုန်ပစ္စည်းများကို စိုက်ပျိုးခြင်း၊ ထုတ်လုပ်ခြင်း၊ ရိပ်သိမ်းခြင်း၊ တာရှည်ခံအောင်ပြုပြင်ခြင်း၊ ထုတ်ပိုးခြင်း၊ ကြိတ်ခွဲခြင်းနှင့် ကုန်ထုတ်လုပ်ခြင်း၊
- (၂၀) (ကျွန်းမှအပ) သစ်နှင့် သစ်တောထွက်ပစ္စည်းများအား (သက်ဆိုင်ရာဌာန၏ခွင့်ပြုချက်ဖြင့်) ခုတ်လှဲခြင်း၊ထုတ်ယူခြင်း၊ ခွဲစိတ်ခြင်း၊ ကုန်ထုတ်လုပ်ခြင်း၊ တာရှည်ခံအောင်ပြုပြင်ခြင်းနှင့် အသားသေစေခြင်း၊
- (၂၁) တိရစ္ဆာန်မွေးမြူခြင်းနှင့် တိရစ္ဆာန်ထွက်ကုန်ပစ္စည်းများအား ပြုပြင်ထုတ်လုပ်ခြင်း၊ စည်သွပ်ခြင်း၊
- (၂၂) ရေထွက်ကုန်ပစ္စည်းများအား ဖမ်းယူခြင်း၊ တာရှည်ခံအောင်ပြုပြင်ခြင်း၊ ကြိတ်ခွဲခြင်း၊ စည်သွပ်ခြင်းနှင့် ပြုပြင်ထုတ်လုပ်ခြင်း၊
- (၂၃) ဓါတ်မြေသြဇာ၊ ပိုးသတ်ဆေးနှင့် တိရစ္ဆာန်အစားအစာများထုတ်လုပ်ခြင်း၊
- (၂၄) လူသုံးကုန်ပစ္စည်းများ ထုတ်လုပ်ခြင်း၊
- (၂၅) အိမ်သုံးကုန်ပစ္စည်းများ ထုတ်လုပ်ခြင်း၊
- (၂၆) ယာဉ်နှင့်စက်ကိရိယာများ၊ အပိုပစ္စည်းများ ထုတ်လုပ်ခြင်း၊
- (၂၇) လက်မှုအနုပညာပစ္စည်းများ၊ ယွန်းထည်များနှင့် ပရိဘောဂများ ထုတ်လုပ်ခြင်း၊
- (၂၈) ဆောက်လုပ်ရေးပစ္စည်းများနှင့် သုတ်ဆေးများ ထုတ်လုပ်ခြင်း၊
- (၂၉) စက်ရုံသုံးပစ္စည်းများ ထုတ်လုပ်ခြင်း၊
- (၃၀) လျှပ်စစ်နှင့်အီလက်ထရောနစ် ကုန်ပစ္စည်းများ ထုတ်လုပ်ခြင်း၊
- (၃၁) အထည်အလိပ်နှင့် အဝတ်အထည်များ ထုတ်လုပ်ခြင်း၊
- (၃၂) အစိုးရ၏ ခွင့်ပြုချက်ဖြင့် သတ္တုရှာဖွေခြင်း၊ တူးဖော်ခြင်း၊ ထုတ်လုပ်ခြင်း၊ ပြုပြင်ခြင်းနှင့် ထွက်ရှိသောကုန်ပစ္စည်းများကို ရောင်းချခြင်းလုပ်ကိုင်ရန်၊
- (၃၃) အေဂျင်စီလုပ်ငန်းအမျိုးမျိုး၊ ကျွမ်းကျင်မှုအတိုင်ပင်ခံများ၊ လုပ်ငန်းအတိုင်ပင်ခံများ၊ အုပ်ချုပ်မှု အတိုင်ပင်ခံများနှင့် အကြံပေး ဝန်ဆောင်မှုလုပ်ငန်းများ၊
- (၃၄) ကြော်ငြာနှင့် ကြော်ငြာ ကိုယ်စားလှယ် လုပ်ငန်းများ၊
- (၃၅) ဖျော်ဖြေရေးလုပ်ငန်းနှင့် ယင်းနှင့် ပတ်သက်သည့် လုပ်ငန်းများ
- (၃၆) ဆေးဝန်ဆောင်မှု လုပ်ငန်းအမျိုးမျိုး၊
- (၃၇) သယ်ယူပို့ဆောင်ရေး လုပ်ငန်း၊ (ဇီးရထားနှင့် လေကြောင်းမှအပ)
- (၃၈) ပုံနှိပ်ထုတ်ဝေခြင်း လုပ်ငန်း၊
- (၃၉) တိုင်းတာရေးနှင့် စစ်ဆေးရေး လုပ်ငန်း၊
- (၄၀) စီမံကိန်းသစ်များ၌ ဖြစ်မြောက်နိုင်စွမ်း ရှိမရှိ လေ့လာခြင်း၊ စီမံကိန်းပုံစံများချမှတ်ခြင်း၊ စီမံကိန်း ကုန်ကျစရိတ်ခန့်မှန်းခြင်းနှင့် တန်ဖိုးတွက်ချက်ခြင်းလုပ်ငန်းများ၊
- (၄၁) စာရင်းရေးသွင်းခြင်း၊ စာရင်းစစ်ဆေးခြင်းနှင့် ဥပဒေ အကြံပေး ဝန်ဆောင်မှု လုပ်ငန်းများ၊
- (၄၂) ယာဉ်နှင့် စက်ကိရိယာအမျိုးမျိုး ကြိုဆိုရေးပြုလုပ်ခြင်း၊ မွမ်းမံခြင်းနှင့် ပြင်ဆင်ခြင်းလုပ်ငန်းများ၊
- (၄၃) လျှပ်စစ်နှင့် အီလက်ထရောနစ် ကုန်ပစ္စည်းများ တပ်ဆင်ခြင်း၊ ပြုပြင်ခြင်းနှင့် မွမ်းမံ တည်ဆောက် ခြင်း လုပ်ငန်းများ၊
- (၄၄) ဆောက်လုပ်ရေးလုပ်ငန်း၊
- (၄၅) ကျောက်မျက်လုပ်ငန်း၊
- (၄၆) ခရီးသွားလုပ်ငန်း၊
- (၄၇) ဟိုတယ်လုပ်ငန်း၊
- (၄၈) အသေးစား ငွေရေးကြေးရေးလုပ်ငန်း၊

(၂) ကုမ္ပဏီမှ သင့်တော်လျှောက်ပတ်သည်ဟု ယူဆပါက ကုမ္ပဏီ၏ စီးပွားရေးလုပ်ငန်းတွင် အကျိုးရှိစေရန် အတွက် မည်သည့် ပုဂ္ဂိုလ်၊ စီးပွားရေး အဖွဲ့အစည်း၊ ကုမ္ပဏီ၊ ဘဏ် ၊ သို့မဟုတ် ၊ ငွေကြေး အဖွဲ့အစည်း ထံမှမဆို ငွေချေးယူရန် ။

ခြွင်းချက် ။ ကုမ္ပဏီသည် အထက်ဖော်ပြပါ ရည်ရွယ်ချက်များကို ပြည်ထောင်စုသမ္မတ မြန်မာ နိုင်ငံတော် အတွင်း ၌ ဖြစ်စေ ၊ အခြား မည်သည့် အရပ်ဒေသ၌ဖြစ်စေ ၊ အချိန်ကာလအလိုက် တည်မြဲနေသော တရား ဥပဒေ များ ၊ အမိန့်ကြော်ငြာစာများ ၊ အမိန့်များ က ခွင့် ပြုထားသည့် လုပ်ငန်းများမှအပ အခြား လုပ်ငန်းများ ကို လုပ်ကိုင် ဆောင်ရွက်ခြင်း မပြုပါ ။ ထို့အပြင် ပြည်ထောင်စု သမ္မတ မြန်မာနိုင်ငံတော် အတွင်း၌ အချိန် ကာလ အားလျော်စွာ တည်မြဲနေသည့် တရား ဥပဒေပြဌာန်းချက်များ ၊ အမိန့် ကြော်ငြာစာများ ၊ အမိန့်များနှင့် လျော်ညီသင့်တော်ခြင်း သို့မဟုတ် ၊ ခွင့် ပြုထားရှိခြင်း ရှိမှ သာလျှင် လုပ်ငန်းများကို ဆောင်ရွက်မည်ဟု ခြွင်းချက်ထားရှိပါသည်။

(၃)

အောက်တွင် အမည်၊ နိုင်ငံသား၊ နေရပ်နှင့် အကြောင်းအရာစုံလင်စွာပါသော ဇယားတွင် လက်မှတ်ရေးထိုးသူ ကျွန်ုပ်တို့ ကိုယ်စီကိုယ်ငှသည် ဤသင်းဖွဲ့မှတ်တမ်းအရ ကုမ္ပဏီတစ်ခုဖွဲ့စည်းရန် လိုလားသည့်အလျောက် ကျွန်ုပ်တို့၏ အမည် အသီးသီးနှင့် ယှဉ်တွဲ ပြထားသော အစုရှယ်ယာများကို ကုမ္ပဏီ၏ မတည်ရင်းနှီးငွေတွင် ထည့်ဝင်ရယူကြရန် သဘောတူကြပါသည်။

စဉ်	အစုထည့်ဝင်သူများ၏အမည်၊ နေရပ်လိပ်စာနှင့် အလုပ်အကိုင်	နိုင်ငံသားနှင့်အမျိုးသား မှတ်ပုံတင်အမှတ်	ဝယ်ယူသော အစုရှယ်ယာ ဦးရေ	ထိုးမြဲ လက်မှတ်
၁	ဦး မောင်ကျေး (ခ) တိကာကွေး ကုန်သည် အမှတ်(ဖိ/၄)၊ ပင်ရွှေညောင်လမ်း၊ တာမွေကလေးရပ်ကွက်၊ တာမွေမြို့နယ် ရန်ကုန်တိုင်းဒေသကြီး	၁၂/လသန(နိုင်) ၀၁၈၁၇၄	၁၀၀၀၀	
၂	ဦး သန်းမြင့် (ခ) ခေါ်တင်အိန် ကုန်သည် အမှတ်(၄၅-အ)၊ ပြည်လမ်း၊ ၁၁-ရပ်ကွက်၊ လှိုင်မြို့နယ် ရန်ကုန်တိုင်းဒေသကြီး	၁၂/လမတ(နိုင်) ၀၂၇၇၇၂	၁၀၀၀၀	

နေ့စွဲ၊

၂၀၁၅ ခုနှစ်၊

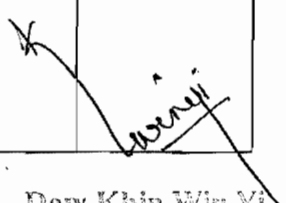
၀၂

လ၊

၀၄

ရက်။

အထက်ပါလက်မှတ်ရှင်များသည် ကျွန်ုပ်တို့၏ရှေ့မှောက်တွင် လက်မှတ်ရေးထိုးကြပါသည်။


Daw Khin Win Yi
B.Com (A.A) C.P.A
Registered Accountant, Auditor
Financial Consultant

မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေ
အစုရှယ်ယာများဖြင့် ပေးရန်တာဝန် ကန့်သတ်ထားသော အများနှင့် မသက်ဆိုင်သည့် ကုမ္ပဏီ

နေရှင်နယ် အင်ဖရာစထရက်ချာ ဟိုးလ်ဒင်း(စ်) ကုမ္ပဏီလီမိတက်

၏

သင်းဖွဲ့စည်းမျဉ်းများ



- ၁။ ဤသင်းဖွဲ့စည်းမျဉ်းနှင့် လိုက်လျောညီထွေမဖြစ်သည့် စည်းမျဉ်းများမှအပ၊ မြန်မာနိုင်ငံကုမ္ပဏီများ အက်ဥပဒေ နောက်ဆက်တွဲ ပထမဇယားပုံစံ 'က' ပါ စည်းမျဉ်းများသည် ဤကုမ္ပဏီနှင့် သက်ဆိုင် စေရမည်။ မြန်မာနိုင်ငံကုမ္ပဏီများ အက်ဥပဒေပုဒ်မ ၁၇(၂)တွင် ဖော်ပြပါရှိသည့် မလိုက်နာ မနေရ စည်းမျဉ်း များသည် ဤကုမ္ပဏီနှင့် အစဉ်သဖြင့် သက်ဆိုင်စေရမည်။

အများနှင့် မသက်ဆိုင်သော ကုမ္ပဏီ

- ၂။ ဤကုမ္ပဏီသည် အများနှင့်မသက်ဆိုင်သည့် ကုမ္ပဏီဖြစ်၍ အောက်ပါ သတ်မှတ်ချက်များသည် အကျိုး သက်ရောက် စေရမည်။
- (က) ဤကုမ္ပဏီက ခန့်အပ်ထားသော ဝန်ထမ်းများမှအပ၊ ဤကုမ္ပဏီ၏ အစုရှင် အရေအတွက်ကို ငါးဆယ် အထိသာ ကန့်သတ်ထားသည်။
- (ခ) ဤကုမ္ပဏီ၏ အစုရှယ်ယာ သို့မဟုတ် ဒီဘင်ချာ သို့မဟုတ် ဒီဘင်ချာစတော့(စ်) တစ်ခုခုအတွက် ငွေထည့်ဝင်ရန် အများပြည်သူတို့အား ကမ်းလှမ်းခြင်း မပြုလုပ်ရန် တားမြစ်ထားသည်။

မ,တည် ရင်းနှီးငွေနှင့် အစုရှယ်ယာ

- ၃။ ကုမ္ပဏီ၏ သတ်မှတ်မ,တည်ငွေရင်းမှာ ကျပ်မှာ ၃၀၀,၀၀၀,၀၀၀,၀၀၀ /-(ကျပ်)
သန်းသုံးသိန်း တိတိ)ဖြစ်၍ ငွေကျပ် ၁၀၀,၀၀၀,၀၀၀ /-(ကျပ်
တစ်သိန်း တိတိ)တန်အစုရှယ်ယာပေါင်း ၃,၀၀၀,၀၀၀ ခွဲထားပါသည်။
ကုမ္ပဏီ၏ ရင်းနှီးငွေကို ကုမ္ပဏီ၏ စည်းမျဉ်းများနှင့် လက်ရှိတရားဝင် တည်ဆဲဖြစ်နေသော တရားဥပဒေ ပြဋ္ဌာန်းချက်များ နှင့်အညီ အထွေထွေ သင်းလုံးကျွတ် အစည်းအဝေး၌ တိုးမြှင့်နိုင်ခွင့်၊ လျှော့ချနိုင်ခွင့်နှင့် ပြင်ဆင်နိုင်ခွင့် အာဏာ ရှိစေရမည်။

- ၄။ မြန်မာနိုင်ငံကုမ္ပဏီများ အက်ဥပဒေပါ ပြဋ္ဌာန်းချက်များကို မထိခိုက်စေလျက် အစုရှယ်ယာများသည် ဒါရိုက်တာများ၏ ကြီးကြပ်ကွပ်ကဲမှု အောက်တွင် ရှိစေရမည်။ ၎င်းဒါရိုက်တာများသည် သင့်လျော်သော ပုဂ္ဂိုလ်များအား သတ်မှတ်ချက် အခြေအနေ တစ်စုံတစ်ရာဖြင့် အစုရှယ်ယာများကို ခွဲဝေချထားခြင်း သို့မဟုတ် ထုခွဲရောင်းချခြင်းတို့ကို ဆောင်ရွက်နိုင်သည်။

- ၅။ အစုရှယ်ယာလက်မှတ်များကို အထွေထွေမန်နေဂျာ သို့မဟုတ် ဒါရိုက်တာအဖွဲ့က သတ်မှတ်သည့် အခြား ပုဂ္ဂိုလ်များက လက်မှတ်ရေးထိုး၍ ကုမ္ပဏီ၏တံဆိပ်ရိုက်နှိပ်ထုတ်ပေးရမည်။ အစုရှယ်ယာ လက်မှတ်သည် ပုံပန်းပျက်ခြင်း၊ ပျောက်ဆုံးခြင်း သို့မဟုတ် ပျက်စီးခြင်းဖြစ်ပါက အဖိုးအခဖြင့် ပြန်လည်အသစ်ပြုလုပ်ပေးမှုကို သော်လည်းကောင်း၊ ဒါရိုက်တာများက သင့်လျော်သည်ဟု ယူဆသော အခြား သက်သေခံ အထောက်အထား တစ်စုံတစ်ရာကို တင်ပြစေ၍ သော်လည်းကောင်း ထုတ်ပေးနိုင်သည်။ ကွယ်လွန်သွားသော အစုရှယ်ယာရှင်တစ်ဦး၏ တရားဝင်ကိုယ်စားလှယ်ကို ဒါရိုက်တာများက အသိအမှတ်ပြုပေးရမည် ဖြစ်သည်။

ဒါရိုက်တာများသည် အစုရှယ်ယာများက ၎င်းတို့၏ အစုရှယ်ယာများအတွက် မပေးသွင်းရသေးသော ငွေများကို အခါအားလျော်စွာ တောင်းဆိုနိုင်သည်။ အစုရှယ်ယာတိုင်းကလည်း ၎င်းတို့ထံတောင်းဆိုသည့် အကြိမ်တိုင်း အတွက် ဒါရိုက်တာများက သတ်မှတ်ထားသည့် ပုဂ္ဂိုလ်များထံ သတ်မှတ်သည့်အချိန်နှင့် နေရာတွင် ပေးသွင်းစေရန် တာဝန်ရှိစေရမည်။ ဆင့်ခေါ်မှုတစ်ခုအတွက် အရစ်ကျပေးသွင်းစေခြင်း၊ သို့မဟုတ် ပယ်ဖျက်ခြင်း သို့မဟုတ် ရွှေ့ဆိုင်းခြင်းတို့ကို ဒါရိုက်တာများက သတ်မှတ်နိုင်သည်။

ဒါရိုက်တာများ

၇။ သင်းလုံးကျွတ် အစည်းအဝေးက တစ်စုံတစ်ရာ သတ်မှတ်ပြဌာန်းမှု မပြုလုပ်သမျှ ဒါရိုက်တာများ၏ အရေအတွက်သည် (၂) ဦးထက်မနည်း၊ (၅၀) ဦးထက်မများစေရ။

ပထမဒါရိုက်တာများသည်-

(၁) ဦး မောင်ကျေး (ခ) တိကာကွေး (၂) ဦး သန်းမြင့် (ခ) ခေါ်တင်အိန်

တို့ဖြစ်ကြပါသည်။

၈။ ဒါရိုက်တာများသည် ၎င်းတို့အနက်မှတစ်ဦးကို မန်နေဂျင်းဒါရိုက်တာအဖြစ် အချိန်အခါအလိုက် သင့်လျော်သော သတ်မှတ်ချက်များ၊ ဉာဏ်ပူဇော်ခများဖြင့် ခန့်ထားရမည်ဖြစ်ပြီး အခါအားလျော်စွာ ဒါရိုက်တာအဖွဲ့က ပေးအပ်သော အာဏာများ အားလုံးကို ၎င်းကအသုံးပြုနိုင်သည်။

၉။ ဒါရိုက်တာတစ်ဦး ဖြစ်မြောက်ရန်လိုအပ်သော အရည်အချင်းသည် ကုမ္ပဏီ၏ အစုရှယ်ယာ အနည်းဆုံး () စု ကိုပိုင်ဆိုင်ခြင်းဖြစ်၍ ၎င်းသည် မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေပုဒ်မ ၈၅ ပါ ပြဌာန်းချက် များကို လိုက်နာရန်တာဝန်ရှိသည်။

၁၀။ အစုရှယ်ယာများ လွှဲပြောင်းရန် တင်ပြချက်ကို မည်သည့် အကြောင်းပြချက်မျှ မပေးပဲ ဒါရိုက်တာ အဖွဲ့သည် ၎င်းတို့၏ ပြည့်စုံ၍ ချုပ်ချယ်ခြင်းကင်းသော ဆင်ခြင်တွက်ဆမှုဖြင့် မှတ်ပုံတင်ရန် ငြင်းဆိုနိုင်သည်။

ဒါရိုက်တာများ၏ ဆောင်ရွက်ချက်များ

၁၁။ ဒါရိုက်တာများသည်၎င်းတို့သင့်လျော်သည် ထင်မြင်သည့်အတိုင်း လုပ်ငန်းဆောင်ရွက်ရန် တွေ့ဆုံ ဆွေးနွေးခြင်း၊ အစည်းအဝေးရွှေ့ဆိုင်းခြင်း၊ အချိန်မှန်စည်းဝေးခြင်း၊ အစည်းအဝေးအထမြောက်ရန် အနည်းဆုံး ဒါရိုက်တာဦးရေ သတ်မှတ်ခြင်းတို့ကိုဆောင်ရွက်နိုင်သည်။ ယင်းသို့ မသတ်မှတ်ပါက ဒါရိုက်တာနှစ်ဦး တက်ရောက်လျှင် အစည်းအဝေးထမြောက်ရမည်။ အစည်းအဝေးတွင် မည်သည့် ပြဿနာမဆို ပေါ်ပေါက်ပါက မန်နေဂျင်းဒါရိုက်တာ၏ အဆုံးအဖြတ်သည် အတည်ဖြစ်ရမည်။ မည်သည့်ကိစ္စများကိုမဆို မဲခွဲဆုံးဖြတ်ရာတွင် မဲအရေအတွက်တူနေပါက သဘာပတိသည် ဒုတိယမဲ သို့မဟုတ် အနိုင်မဲကို ပေးနိုင်သည်။

၁၂။ ဒါရိုက်တာများ၏အစည်းအဝေးကို မည်သည့်ဒါရိုက်တာကမဆို အချိန်မရွေး ခေါ်နိုင်သည်။

၁၃။ ဒါရိုက်တာအားလုံးက လက်မှတ် ရေးထိုးထားသော ရေးသားထားသည့် ဆုံးဖြတ်ချက် တစ်ရပ်သည် နည်းလမ်းတကျ ခေါ်ယူ ကျင်းပသော အစည်းအဝေးက အတည်ပြုသည့် ဆုံးဖြတ်ချက် ကဲ့သို့ပင် ကိစ္စ အားလုံး အတွက် အကျိုးသက် ရောက်စေရမည်။

ဒါရိုက်တာများ၏ လုပ်ပိုင်ခွင့်နှင့် တာဝန်များ

၁၄။ မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေ နောက်ဆက်တွဲဇယားပုံစံ(က)ပါ စည်းမျဉ်းအပိုဒ် ၇၁ တွင် ပေးအပ်ထားသော အထွေထွေ အာဏာများကို မထိခိုက်စေဘဲ ဒါရိုက်တာများသည် အောက်ဖော်ပြပါ အာဏာများ ရှိရမည်ဟု အတိအလင်း ထုတ်ဖော်ကြေငြာသည်။ အာဏာဆိုသည်မှာ -

- (၁) ဒါရိုက်တာများက သင့်လျော်သည်ဟု ယူဆသော တန်ဖိုးနှင့် စည်းကမ်းများ ၊ အခြေအနေ များ သတ်မှတ်၍ ကုမ္ပဏီက ရယူရန် အာဏာရှိသည့် မည်သည့်ပစ္စည်း ၊ အခွင့်အရေးများ၊ အခွင့်အလမ်းများ မဆို ဝယ်ယူရန် သို့မဟုတ် အခြားနည်းလမ်းများဖြင့် ရယူပိုင်ဆိုင်ရန် အပြင် ကုမ္ပဏီက ပိုင်ဆိုင်ခွင့်ရှိသော မည်သည့်ပစ္စည်း၊ အခွင့်အရေးများ ၊ အခွင့်အလမ်း များကိုမဆို သင့်တော်သော စည်းကမ်းချက်များသတ်မှတ်၍ ရောင်းချခြင်း၊ အငှားချခြင်း ၊ စွန့်လွှတ်ခြင်း သို့မဟုတ် အခြားနည်းလမ်းများဖြင့် ဆောင်ရွက် ခြင်းတို့ကို ပြုလုပ်ရန် ။
- (၂) သင့်လျော်သော စည်းကမ်းသတ်မှတ်ချက်များဖြင့် ငွေကြေးများကို ချေးငှားရန် သို့မဟုတ် အဆိုပါ ချေးငှားသော ငွေကြေးများကို ပြန်လည်ပေးဆပ်ရန် အတွက်အာမခံများ ထားရှိ ရန် အပြင်၊ အထူးသဖြင့် ဤ ကုမ္ပဏီ၏ ဒီဘင်ချာများ ၊ ဒီဘင်ချာစတော့ပုံများ ၊ ခေါ်ယူခြင်းမပြုရသေးသော ရင်းနှီးငွေများ အပါအဝင် ယခုလက်ရှိ နှင့် နောင်ရှိမည့် ပစ္စည်းများအားလုံး သို့မဟုတ် တစ်စိတ်တစ်ဒေသ ကို အပေါင်ပြု၍ ထုတ်ဝေရန် ။
- (၃) ဤကုမ္ပဏီက ရယူထားသော အခွင့်အရေးများ သို့မဟုတ် ဝန်ဆောင်မှုများ အားလုံး သို့မဟုတ် တစ်စိတ်တစ်ဒေသကို ငွေကြေးအားဖြင့် ပေးချေရန်၊ သို့မဟုတ် အစုရှယ်ယာ များ၊ ငွေချေးစာချုပ်များ ၊ သို့မဟုတ် ဒီဘင်ချာများ သို့မဟုတ် ဤကုမ္ပဏီ၏ အခြားသော အာမခံ စာချုပ်များကိုထုတ်ပေးရန်၊ ထို့အပြင် အဆိုပါအစုရှယ်ယာများ ထုတ်ပေးရာ၌ ငွေအပြည့်ပေးသွင်းပြီး သော အစုရှယ်ယာအနေဖြင့် သော်လည်းကောင်း ၊ တစ်စိတ်တစ်ဒေသ ပေးသွင်းပြီးသော အစုရှယ်ယာများ အနေဖြင့် သော် လည်းကောင်း ၊ သဘောတူညီ သကဲ့သို့ ထုတ်ဝေပေးရန်နှင့် အဆိုပါ ငွေချေးစာချုပ်များ ၊ ဒီဘင်ချာများ သို့မဟုတ် ကုမ္ပဏီ၏ အခြားသော အာမခံ စာချုပ်များဖြင့် ထုတ်ဝေပေးရာ၌ ခေါ်ဆိုခြင်း မပြုရသေးသော ရင်းနှီးငွေများ အပါအဝင် ဤကုမ္ပဏီ၏ ပစ္စည်းအားလုံး သို့မဟုတ် တစ်စိတ်တစ်ဒေသကို အပေါင်ပြု၍ ဖြစ်စေ ၊ ထိုကဲ့သို့ မဟုတ်ဘဲ ဖြစ်စေ ထုတ်ပေးရန်။
- (၄) ဤကုမ္ပဏီနှင့် ပြုလုပ်ထားသော ကန်ထရိုက်စာချုပ်များ ၊ တာဝန်ယူထားသည့် လုပ်ငန်း များ ပြီးစီးအောင် ဆောင်ရွက်ခြင်း အလို့ငှာ ခေါ်ယူခြင်းမပြုရသေးသော ရင်းနှီးငွေများ အပါအဝင်ဤကုမ္ပဏီ၏ပစ္စည်းရပ်များအားလုံးသို့မဟုတ်တစ်စိတ်တစ်ဒေသကို ပေါင်နှံ၍ သော် လည်းကောင်း၊ အပေါင်ပြု၍သော် လည်းကောင်း ၊ သို့မဟုတ် အစုရှယ်ယာများ အတွက် ငွေများတောင်းခံခေါ်ယူ၍သော်လည်းကောင်း၊ ခွင့်ပြုရန် သို့မဟုတ် သင့်လျော် သည့် အတိုင်း ဆောင်ရွက်ရန် ။
- (၅) မန်နေဂျာများ ၊ အတွင်းရေးမှူးများ အရာရှိများ ၊ စာရေးများ ၊ ကိုယ်စားလှယ်များနှင့် ဝန်ထမ်း များကို အမြဲ တမ်းယာယီ သို့မဟုတ် အထူးကိစ္စရပ်များအတွက် ခန့်ထားခြင်း ၊ ရပ်စဲခြင်း၊ဆိုင်းငံ့ခြင်းများအတွက် လည်းကောင်း၊ အဆိုပါပုဂ္ဂိုလ်တို့၏တာဝန်များ၊ အာဏာများ ၊ လစာငွေများ ၊ အခြားငွေကြေးများကို သတ်မှတ်ရာ၌ လည်းကောင်း ၊ အာမခံပစ္စည်းများ တောင်းခံရာ၌ လည်းကောင်း သင့်လျော်သလို ဆောင် ရွက်ရန် ၊ ထို့အပြင် အဆိုပါကိစ္စများ အတွက် ကုမ္ပဏီ၏ မည်သည့်အရာရှိကိုမဆို ကိစ္စရပ်များ အားလုံးကို ဖြစ်စေ ၊ တစ်စိတ်တစ်ဒေသကို ဖြစ်စေ ဒါရိုက်တာများ၏ ကိုယ်စား ဆောင်ရွက်နိုင်ရေးအတွက် တာဝန်လွှဲအပ် ရန် ။
- (၆) ဤ ကုမ္ပဏီ၏ ဒါရိုက်တာ တစ်ဦးအား ဒါရိုက်တာရာထူးနှင့် တွဲဖက်၍ မန်နေဂျင် ဒါရိုက်တာ၊ အထွေထွေ မန်နေဂျာ ၊ အတွင်းရေးမှူး သို့မဟုတ် ဌာနခွဲမန်နေဂျာ အဖြစ် ခန့်ထားရန် ။

- (၇) မည်သည့်အစုရှင် ထံမှမဆို ၎င်းတို့ ၏ အစုရှယ်ယာများ အားလုံးကို ဖြစ်စေ ၊ အချို့အဝက်ကို ဖြစ်စေ စွန့်လွှတ်ခြင်းအား သဘောတူညီသော စည်းကမ်းချက်များဖြင့် လက်ခံရန် ။
- (၈) ဤ ကုမ္ပဏီက ပိုင်ဆိုင်သော သို့မဟုတ် ပိုင်ဆိုင်ခွင့်ရှိသော သို့မဟုတ် အခြား အကြောင်းများ ကြောင့် ဖြစ်သော မည်သည့်ပစ္စည်းကိုမဆို ကုမ္ပဏီ၏ ကိုယ်စား လက်ခံထိန်းသိမ်းထားရန် အတွက် မည်သည့် ပုဂ္ဂိုလ် သို့မဟုတ်ပုဂ္ဂိုလ်များကို မဆို ခန့်ထားရန်နှင့်အဆိုပါ ယုံမှတ် အပ်နှံခြင်းများနှင့် ပတ်သက်၍ လိုအပ်သော စာချုပ် စာတမ်း များ ချုပ်ဆို ပြုလုပ်ရန် ။
- (၉) ဤကုမ္ပဏီ၏ အရေးအရာများနှင့် စပ်လျဉ်း၍ ဤကုမ္ပဏီကပြုလုပ်သော သို့မဟုတ် ဤကုမ္ပဏီပေါ် သို့မဟုတ် ဤကုမ္ပဏီ၏အရာရှိများအပေါ် ပြုလုပ်သော တရားဥပဒေအရ စွဲဆိုဆောင်ရွက်မှုများကို တရားစွဲဆို ၊အရေးယူ ၊ခုခံကာကွယ်ရန် သို့မဟုတ်ခွင့်လွှတ်ရန် ၊ ထို့အပြင် ဤကုမ္ပဏီက ရရန်ရှိသော ကြွေးမြီများနှင့် ဤကုမ္ပဏီအပေါ်တောင်းခံသော ကြွေးမြီများနှင့်ပတ်သက်၍ ပေးဆပ်ရန် အချိန်ကာလရွှေ့ဆိုင်းခွင့်ပြုခြင်း သို့မဟုတ် နှစ်ဦးနှစ်ဖက်သဘောတူ ကျေအေးခြင်းများ ပြုလုပ်ရန် ။
- (၁၀) ဤကုမ္ပဏီက ပေးရန်ရှိသော သို့မဟုတ်ရရန် ရှိသောငွေတောင်းခံခြင်းများကို ဖြန့်ဖြေရေး ခုံသမာဓိထံသို့ဖြေရှင်းရန်အတွက် အပ်နှံရန်အပြင် ဖြန့်ဖြေရေးခုံသမာဓိ၏ ဆုံးဖြတ်ချက် အတိုင်း လိုက်နာဆောင်ရွက်ရန်။
- (၁၁) ဤကုမ္ပဏီက ရရန်ရှိသော တောင်းဆိုချက်၊ တောင်းခံချက်များနှင့် ကုမ္ပဏီသို့ ပေးရန် ရှိသော ငွေကြေးများအတွက် ပြေစာများပြုလုပ်ခြင်း၊ လျှော်ပစ်ခြင်းနှင့် အခြားသော နည်းဖြင့် စွန့်လွှတ်ခြင်းများကို ပြုလုပ်ရန်။
- (၁၂) လူမွဲစာရင်းခံခြင်း၊ကြွေးမြီမဆပ်နိုင်ခြင်းကိစ္စများနှင့် ပတ်သက်၍ ဤကုမ္ပဏီ၏ ကိုယ်စား ဆောင်ရွက်ရန်။
- (၁၃) ငွေလွှဲစာတမ်းများ၊ချက်လက်မှတ်များ၊ဝန်ခံကတိစာချုပ်များ ၊ ထပ်ဆင့်လက်မှတ်ရေးထိုး ခြင်းများ၊ လျှော်ပစ်ခြင်းများ၊ ကန်ထရိုက်စာချုပ်များနှင့် စာရွက်စာတမ်းများကို ကုမ္ပဏီ၏ ကိုယ်စား မည်သူက လက်မှတ်ရေးထိုးခွင့် ရှိသည်ကို စိစစ်သတ်မှတ်ရန်။
- (၁၄) ဒါရိုက်တာများက သင့်လျော်သည်ဟု ယူဆပါက သင့်လျော်လျှောက်ပတ်သော နည်းလမ်းများဖြင့် လတ်တလော အသုံးပြုရန် မလိုသေးသော ကုမ္ပဏီပိုင်ငွေများကို အာမခံပစ္စည်းပါသည်ဖြစ်စေ၊ မပါသည်ဖြစ်စေ ရင်းနှီးမြှုပ်နှံမှုထားရန်နှင့် စီမံခန့်ခွဲထား ရန်၊ ထို့အပြင် အချိန်ကာလ အားလျော်စွာ မြှုပ်နှံထား သောငွေများကိုပြန်လည် ရယူရန်နှင့် ပြင်ဆင်ပြောင်းလွှဲရန် ။
- (၁၅) ဤ ကုမ္ပဏီ၏ အကျိုးအတွက် ငွေကြေးစိုက်ထုတ် ကုန်ကျခံထားသော ဒါရိုက်တာ သို့မဟုတ် အခြား ပုဂ္ဂိုလ်များက ကုမ္ပဏီ၏ (လက်ရှိနောင်တွင်ရှိမည့်) ပစ္စည်းများကို ဤကုမ္ပဏီ၏ အမည်ဖြင့်ဖြစ်စေ၊ ဤကုမ္ပဏီ၏ ကိုယ်စားဖြစ်စေ ပေါင်နှံခြင်းများကို သင့်လျော်သည်ဟု ယူဆပါကဆောင်ရွက်ခွင့်ပြုရန် အဆိုပါပေါင်နှံခြင်းဆိုရာ၌ ရောင်းချ နိုင်သည့် အာဏာနှင့် အခြားသော သဘောတူညီထားသည့် တရားဝင်သဘောတူညီချက်များနှင့် ဥပဒေ ပြဌာန်း ချက်များ ပါပါဝင်သည်။
- (၁၆) ဤကုမ္ပဏီက ခန့်အပ်ထားသော မည်သည့်အရာရှိ သို့မဟုတ် ပုဂ္ဂိုလ်ကိုမဆို အတိအကျ ဆောင်ရွက်ခဲ့သောလုပ်ငန်း သို့မဟုတ် ဆောင်ရွက်မှုတစ်ခုအတွက်ရရှိသော အမြတ်ငွေမှ ကော်မရှင်ပေးခြင်းသို့မဟုတ်ကုမ္ပဏီ၏အထွေထွေအမြတ်အစွန်းမှ ခွဲဝေပေးခြင်းများ ပြုလုပ်ရန် နှင့် အဆိုပါကော်မရှင်များ အမြတ်များ ခွဲဝေပေးခြင်းစသည်တို့ကို ဤကုမ္ပဏီ၏ လုပ်ငန်းကုန်ကျ စရိတ် တစ်စိတ်တစ်ဒေသ အဖြစ် သတ်မှတ်ရန်။

- (၁၇) ဤ ကုမ္ပဏီ၏ လုပ်ငန်းများ အရာရှိများ ဝန်ထမ်းများနှင့် အစုရှင်များအတွက် ထုတ်ပြန်ထားသော စည်းမျဉ်းများ၊ စည်းကမ်းချက်များ ၊ စည်းကမ်းဥပဒေများကို အခါ အားလျော်စွာ သတ်မှတ်ခြင်း ၊ ပြင်ဆင်ခြင်း ၊ ဖြည့်စွက်ခြင်း များ ဆောင်ရွက်ရန်။
- (၁၈) ဤ ကုမ္ပဏီ၏ လုပ်ငန်းအတွက် ဤကုမ္ပဏီ အမည်ဖြင့်ဖြစ်စေ ၊ ဤကုမ္ပဏီ၏ ကိုယ်စားဖြစ်စေ လိုအပ်သည် ဟု ယူဆလျှင် ညှိနှိုင်းဆွေးနွေးခြင်းနှင့် ကန်ထရိုက်စာချုပ် ချုပ်ဆိုခြင်းများ ကို ပြုလုပ်ရန် ၊ ဖျက်သိမ်းရန်နှင့် ပြင်ဆင်ရန် အပြင် အဆိုပါ ဆောင်ရွက်ချက် စာချုပ်များနှင့် ကိစ္စရပ်များကို လည်းကောင်း ၊ ၎င်းတို့နှင့် စပ်လျဉ်း သော ကိစ္စရပ်များကို လည်းကောင်း လုပ်ကိုင်ဆောင်ရွက်ရန် ။
- (၁၉) ဒါရိုက်တာများက သင့်လျော်သည်ဟု ယူဆပါက ကုမ္ပဏီ၏ စီးပွားရေးလုပ်ငန်းတွင် အကျိုးရှိစေရန် အတွက် မည်သည့် ပြည်တွင်းပြည်ပပုဂ္ဂိုလ်၊ စီးပွားရေးအဖွဲ့အစည်းများ၊ ကုမ္ပဏီသို့မဟုတ်ဘဏ် သို့မဟုတ် ငွေကြေးအဖွဲ့အစည်း ထံမှ မဆို ငွေချေးယူရန် ။

အထွေထွေ အစည်းအဝေးကြီးများ

၁၅။ ကုမ္ပဏီကို ဥပဒေအရ ဖွဲ့စည်းတည်ထောင်ပြီးသည့် နေ့မှ တစ်ဆယ့်ရှစ်လအတွင်း အထွေထွေ သင်းလုံးကျွတ် အစည်းအဝေးကြီးကို ကျင်းပရမည်။ ထို့နောက် ဒါရိုက်တာအဖွဲ့က သတ်မှတ်ပေး သည့် အချိန်နှင့် နေရာများတွင် ပြက္ခဒိန်နှစ် တစ်နှစ်လျှင် အနည်းဆုံး တစ်ကြိမ် (နောက်ဆုံး ကျင်းပသည့် အထွေထွေအစည်း အဝေးကြီးနှင့် တစ်ဆယ့်ငါးလထက် မပိုသည့် အချိန်၌) ကျင်းပရမည်။ သင်းလုံးကျွတ် အစည်းအဝေး စတင်၍ လုပ်ငန်းအတွက် ဆွေးနွေးချိန်တွင် အစည်းအဝေးအထမြောက်ရန် သတ်မှတ်သည့် အစုရှင် အရေ အတွက် မတက်ရောက်သော မည်သည့်သင်းလုံးကျွတ် အစည်းအဝေးတွင်မဆို လုပ်ငန်းနှင့် ပတ်သက်၍ ဆုံးဖြတ် ဆောင်ရွက်ခြင်း မပြုရ ၊ ဤတွင် အခြားနည်းသတ်မှတ် ပြဋ္ဌာန်းခြင်း မရှိလျှင်ထုတ်ဝေထားသည့် မ,တည်ရင်းနှီးငွေ အစုရှယ်ယာများ၏ ငါးဆယ်ရာခိုင်နှုန်းထက် မနည်း ပိုင်ဆိုင်ကြသည့် (နှစ်ဦးထက် မနည်းသော) အစုရှင်များကိုယ်တိုင် တက်ရောက်လျှင် လုပ်ငန်းကိစ္စ အားလုံး ဆောင်ရွက်ရန် အတွက် အစည်းအဝေး အထမြောက်သည် ဦးရေ ဖြစ်သည်။ အကယ်၍ ကုမ္ပဏီတွင် အစုရှင် အရေအတွက် နှစ်ဦးတည်းသာရှိသည် ကိစ္စတွင်မူ ထိုနှစ်ဦးတည်း သည်ပင်လျှင် အစည်းအဝေး အထမြောက်ရန် သတ်မှတ်သည့် အရေအတွက် ဖြစ်စေ ရမည်။

အမြတ်ဝေစုများ

၁၆။ သင်းလုံးကျွတ် အစည်းအဝေးတွင် ဤကုမ္ပဏီ၏အစုရှင်များအား ခွဲဝေပေးသည့် အမြတ်ဝေစုကို ကြေငြာ ရမည်။ သို့ရာတွင် အမြတ်ဝေစုသည် ဒါရိုက်တာများက ထောက်ခံသော ငွေပမာဏထက် မကျော်လွန် စေရ။ သက်ဆိုင်ရာနှစ်၏ အမြတ်ပမာဏ သို့မဟုတ် အခြားမခွဲဝေ ရသေးသည့် အမြတ်ပမာဏမှအပ အမြတ် ဝေစုကို ခွဲဝေမပေးရ ။

ရုံးဝန်ထမ်းများ

၁၇။ ကုမ္ပဏီသည် လုပ်ငန်းတစ်ခုကို ဖွင့်လှစ်၍ဆောင်ရွက်မည်ဖြစ်ပြီး အရည်အချင်းပြည့်မီသူ ပုဂ္ဂိုလ် တစ်ဦးအား အထွေထွေ မန်နေဂျာအဖြစ် ခန့်အပ်ရန်နှင့် အခြားအရည်အချင်း ပြည့်မီသူများ အား ရုံးဝန်ထမ်းများအဖြစ် ခန့်အပ်မည်ဖြစ်သည်။ လစာ ၊ ခရီးသွားလာစရိတ် နှင့် အခြား အသုံးစရိတ်များကဲ့ သို့သော ဉာဏ် ပူဇော်ခ များနှင့် အခကြေးငွေများကို ဒါရိုက်တာအဖွဲ့က သတ်မှတ်မည်ဖြစ်ပြီး ၎င်း သတ်မှတ်ချက်များကို သင်းလုံးကျွတ် အစည်းအဝေးက အတည်ပြု ရမည်။ အထွေထွေမန်နေဂျာသည် လုပ်ငန်းရုံး၏ ထိရောက်စွာ လုပ်ငန်းလည်ပတ်မှု အားလုံး အတွက် တာဝန်ရှိစေရမည်ဖြစ်ပြီး မန်နေဂျင်းဒါရိုက်တာအား တာဝန်ခံ၍ ဆောင်ရွက်ရမည်။

ငွေစာရင်းများ

၁၈။ ဒါရိုက်တာများသည် သင့်လျော်သည့် ငွေစာရင်းစာအုပ်များကိုအောက်ဖော်ပြပါသတ်မှတ်ချက်များ နှင့် အညီ ထားသို့ ထိန်းသိမ်းဆောင်ရွက်သွားရမည်။

- (၁) ကုမ္ပဏီ၏ ရငွေ၊ သုံးငွေများ၏ ပမာဏနှင့် ၎င်းငွေ ၊ သုံးငွေများ ဖြစ်ပေါ်ခြင်းနှင့် စပ်လျဉ်းသည့် အကြောင်း ကိစ္စများ။
- (၂) ကုမ္ပဏီ ၏ ကုန်ပစ္စည်းများ ရောင်းချခြင်းနှင့် ဝယ်ယူခြင်းများ။
- (၃) ဤ ကုမ္ပဏီ၏ ရရန် ပိုင်ခွင့် နှင့် ပေးရန် တာဝန်များ။

၁၉။ ငွေစာရင်းစာအုပ် အားလုံးကို ဤကုမ္ပဏီ၏ မှတ်ပုံတင်ထားသော လုပ်ငန်းရုံးများ သို့မဟုတ် ဒါရိုက်တာများက သင့်လျော်သည်ဟု ထင်မြင်ယူဆသော အခြားနေရာများတွင် သိမ်းဆည်း ထားရမည်ဖြစ်ပြီး ၊ ရုံးချိန် အတွင်း၌ ဒါရိုက်တာများက စစ်ဆေးနိုင်ရန် ပြသထားရမည်။

စာရင်းစစ်

၂၀။ စာရင်းစစ်များကိုခန့်အပ်ထားရမည်။ ၎င်းစာရင်းစစ်များ၏တာဝန်သည် မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေ သို့မဟုတ် အခါအားလျော်စွာ ပြင်ဆင်သတ်မှတ်သည့် စည်းမျဉ်း စည်းကမ်း များနှင့် လိုက်လျော ညီထွေ ဖြစ်ရမည်။

နို့တစ်စာ

၂၁။ ဤကုမ္ပဏီသည် မည်သည့်အစုရှင်ထံသို့မဆို နို့တစ်စာကို လက်ရောက်ပေးအပ်ခြင်း သို့မဟုတ် နို့တစ်စာပါသော စာကိုစာတိုက်ခ ကြိုတင်ပေးထား၍ ၎င်းအစုရှင်ထံ မှတ်ပုံတင်လိပ်စာအတိုင်း စာတိုက်မှ တဆင့်လိပ်ပူပေးပို့ခြင်းအားဖြင့် ပေးပို့နိုင်ပါသည်။

တံဆိပ်

၂၂။ ဒါရိုက်တာများသည် တံဆိပ်ကို လုံခြုံစွာ ထိန်းသိမ်းထားရန်အတွက် စီမံဆောင်ရွက်ရမည်။ ထိုတံဆိပ်ကို ဒါရိုက်တာများကကြိုတင်ပေး အပ်ထားသည့် ခွင့်ပြုချက်ဖြင့်မှတစ်ပါး၊ ထို့အပြင် အနည်းဆုံး ဒါရိုက်တာ တစ်ဦး ရှေ့မှောက်တွင်မှတစ်ပါး မည်သည့်အခါမျှ မသုံးရ။ တံဆိပ်ရိုက်နှိပ် ထားသည့် စာရွက်စာတမ်း တိုင်းတွင် ထိုဒါရိုက်တာက လက်မှတ်ရေးထိုးရမည်။

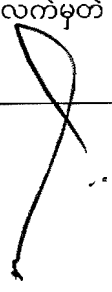
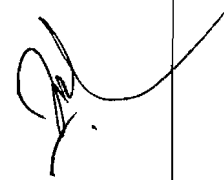
လျော်ကြေး

၂၃။ မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေပုဒ်မ ၈၆(ဂ) တွင် ဖော်ပြပါရှိသည့် ပြဌာန်းချက်များ၊ လက်ရှိတရားဝင် တည်ဆဲဥပဒေ ပြဌာန်းချက်များနှင့် မဆန့်ကျင်စေဘဲ ကုမ္ပဏီ၏ဒါရိုက်တာ၊ စာရင်းစစ်၊ အတွင်းရေးမှူး သို့မဟုတ် အခြာအရာရှိတစ်ဦးဦးမှာ မိမိတာဝန်ဝတ္တရားများကို ဆောင်ရွက်ရာ၌ဖြစ်စေ ထိုတာဝန် ဝတ္တရားများနှင့် စပ်လျဉ်း၍ဖြစ်စေ ကျခံခဲ့သည့်စရိတ်များ၊ တောင်းခံငွေများ၊ ဆုံးရှုံးငွေများ၊ ကုန်ကျငွေ များ နှင့် ကြွေးမြီတာဝန်များအတွက် ကုမ္ပဏီထံမှ လျော်ကြေးရထိုက်ခွင့်ရှိစေရမည်။

ဖျက်သိမ်းခြင်း

၂၄။ ကုမ္ပဏီ၏ အထွေထွေ အစည်အဝေး ဆုံးဖြတ်ချက်ဖြင့် ကုမ္ပဏီအား ဖျက်သိမ်း နိုင်သည်။ ယင်းသို့ ဖျက်သိမ်းရာတွင် မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေများနှင့် ယင်းဥပဒေများအား အခါအားလျော်စွာ ပြင်ဆင် ပြောင်းလဲထားသည့် တရားဥပဒေများတွင် ပါဝင်သည့် စည်းမျဉ်းများအတိုင်း လိုက်နာပြုလုပ် ရမည်။

အောက်တွင် အမည်၊ နိုင်ငံသား၊ နေရပ်နှင့် အကြောင်းအရာစုံလင်စွာပါသော ဇယားတွင် လက်မှတ်ရေးထိုးသူ ကျွန်ုပ်တို့ ကိုယ်စီကိုယ်ငှသည် ဤသင်းဖွဲ့စည်းမျဉ်းအရ ကုမ္ပဏီတစ်ခုဖွဲ့စည်းရန် လိုလားသည့်အလျောက် ကျွန်ုပ်တို့၏ အမည် အသီးသီးနှင့် ယှဉ်တွဲ ပြထားသော အစုရှယ်ယာများကို ကုမ္ပဏီ၏ မတည်ရင်းနှီးငွေတွင် ထည့်ဝင်ရယူကြရန် သဘောတူကြပါသည်။

စဉ်	အစုထည့်ဝင်သူများ၏အမည်၊ နေရပ်လိပ်စာနှင့် အလုပ်အကိုင်	နိုင်ငံသားနှင့်အမျိုးသား မှတ်ပုံတင်အမှတ်	ဝယ်ယူသော အစုရှယ်ယာ ဦးရေ	ထိုးမြဲ လက်မှတ်
၁	ဦး မောင်ကျေး (ခ) တီကာကွေး ကုန်သည် အမှတ်(စီ/၄)၊ ပင်ရွှေညောင်လမ်း၊ တာမွေကလေးရပ်ကွက်၊ တာမွေမြို့နယ် ရန်ကုန်တိုင်းဒေသကြီး	၁၂/လသန(နိုင်) ၀၁၈၁၇၄	၁၀၀၀၀	
၂	ဦး သန်းမြင့် (ခ) ခေါ်တင်အိန် ကုန်သည် အမှတ်(၄၅-အေ)၊ ပြည်လမ်း၊ ၁၁-ရပ်ကွက်၊ လှိုင်မြို့နယ် ရန်ကုန်တိုင်းဒေသကြီး	၁၂/လမတ(နိုင်) ၀၂၇၇၇၂	၁၀၀၀၀	

နေ့စွဲ၊

၂၀၁၅ ခုနှစ်၊

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ရက်။

Daw Khin Win Yi

B.Com (A.A) C.P.A

Registered Accountant, Auditor
Financial Consultant

အထက်ပါလက်မှတ်ရှင်များသည် ကျွန်ုပ်တို့၏ ရှေ့မှောက်တွင် လက်မှတ်ရေးထိုးကြပါသည်။

THE MYANMAR COMPANY ACT
PRIVATE COMPANY LIMITED BY SHARES

Memorandum Of Association

OF
**NATIONAL INFRASTRUCTURE HOLDINGS COMPANY
LIMITED**



- I. The name of the Company is **NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED**
- II. The registered office of the Company will be situated in the Union of Myanmar.
- III. The liability of the members is limited.
- IV. The authorised capital of the Company is Ks- **300,000,000,000** /-(Kyats **Three Hundred Thousand Million** Only) divided into (**3000,000**) shares of Ks. **100,000.00** /-(Kyats **One Hundred Thousand** Only) each, with power in General Meeting either to increase, reduce or alter such capital from time to time in accordance with the regulations of the Company and the legislative provisions for the time being in force in this behalf.


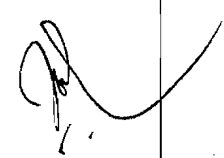
V. The Objective For Which The company is established are

1. Trading of Agricultural and farm produces.
2. Trading of Forest products and value-added wood-based products.
3. Trading of Animal by-products and Animal feed.
4. Trading of Marine products.
5. Trading of Fertilizer and insecticides.
6. Trading of Chemicals and dyes.
7. Trading of Factory utensils and raw material.
8. Trading of Household goods.
9. Trading of Personal goods.
10. Trading of Construction materials and paints.
11. Trading of Electrical and electronic products.
12. Trading of Vehicles, Machinery and spares.
13. Trading of Tools and implement.
14. Trading of Medicines and medical equipment.
15. Trading of Foodstuff and general merchandise.
16. Trading of Textile and garment.
17. Trading of Paper, stationery and photographic stores.
18. Trading of Office equipment and educational supplies.
19. Growing, producing, harvesting, preserving, packing, milling and manufacturing of agricultural and farm products.
20. Felling, extracting (with the permission from the authorities concerned) milling, manufacturing, preserving and seasoning of timber(excluding-teak) and forest products.
21. Livestock breeding, processing and canning of livestock products.
22. Finishing, preserving, milling, canning and processing of marine products.
23. Producing fertilizers, insecticides and animal feeds.
24. Manufacturing of personal goods.
25. Manufacturing of household goods.
26. Manufacturing of vehicles, machineries and spares.
27. Manufacturing of arts and crafts, lacquerwares and furniture.
28. Manufacturing of construction materials and paints.
29. Manufacturing of factory utensils.
30. Manufacturing of electrical and electronic goods.
31. Manufacturing of textile, garments and clothing.
32. To carry on the business of exploration, exploitation, production, processing of minerals and marketing of its products with the permission of the Government.
33. All kinds of agency business, technical consultants, business consultants, management consultants and advisory services.
34. Advertising and its agency business.
35. Business of entertainments and related activities.
36. Business of all kinds of medical services.
37. Business of transportation (except railways and airways)
38. Business of printing and publishing.
39. Business of surveying and inspection.
40. Business of feasibility study on new projects, projects formulation, project appraisal and project evaluation.
41. Business of Account writing, Auditing and legal advisory services.
42. Business of servicing, maintenance of repairing of all kinds of vehicles and machines.
43. Business of installation, maintenance and renovation of electrical and electronic goods.
44. Consturction
45. Gems
46. Travels & Tours
47. Hotel
48. Macro Finance And Financial Services
49. Business of all kinds of educational Services

VI. To borrow money for the benefit of the Company's business from any person, firm, company, bank or financial organization in the manner that the Company shall think fit.

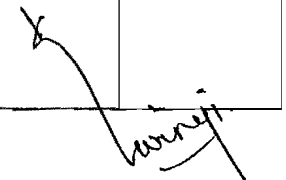
PROVISO: Provided that the Company shall not exercise any of the above objects whether in the Union of Myanmar or elsewhere, save in so far as it may be entitled so as to do in accordance with the Laws, Orders and Notifications in force from time to time and only subject to such permission and or approval as may be prescribed by the Laws, Orders and Notifications of the Union of Myanmar for the

We, the several persons, whose names, nationalities, addresses and descriptions are subscribed below, are desirous of being formed into a Company in pursuance of this Memorandum of Association, and we respectively agree to take the number of shares in the Capital of the Company set opposite our respective names.

Sr. No.	Name, Address and Occupation of Subscribers	Nationality & N.R.C No.	Number of Shares taken	Signatures
1	U Maung Kyay @ Tee Kar Kway Merchant No.(C/4), Pin Shwe Nyung Street, Tamwe Kalay Ward, Tamwe Township, YANGON	12/LATHANA(NAING)018174	10000	
2	U Than Myint @ Khaw Tin Eain Merchant No.(45-A), Pyay Road, 11-Ward, Hlaing Township, YANGON	12/LAMATA(NAING)027772	10000	

Dated 04 the 02 day of 2015

It is hereby certified that the persons mentioned above put their signatures in my presence.


Daw Khin Win VI
B.Com (A.A) C.P.A
Registered Accountant, Auditor
Financial Consultant

THE MYANMAR COMPANIES ACT
PRIVATE COMPANY LIMITED BY SHARES
Articles Of Association

NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED



1. The regulations contained in Table 'A' in the First Schedule to the Myanmar Companies Act shall apply to the Company save in so far as such regulations which are inconsistent with the following Articles. The compulsory regulations stipulated in Section 17 (2) of the Myanmar Companies Act shall always be deemed to apply to the Company.

PRIVATE COMPANY

2. The Company is to be a Private Company and accordingly following provisions shall have effect:-
- (a) *The number of members of the Company, exclusive of persons who are in the employment of the Company, shall be limited to fifty.*
- (b) *Any invitation to the public to subscribe for any share or debenture or debenture stock of the Company is hereby prohibited.*

CAPITAL AND SHARES

3. The Authorised Capital of the Company is Ks. **300,000,000,000** /-(Kyats **Three Hundred Thousand Million** only) divided into (**3,000,000**) shares of Ks **100,000.00** /-(Kyats **One Hundred Thousand** only) each, with power in General Meeting either to increase, reduce or alter such capital from time to time in accordance with the regulations of the Company and the legislative provisions for the time being in force in this behalf.
4. Subject to the provisions of the Myanmar Companies Act the shares shall be under the control of the Directors, who may allot or otherwise dispose of the same to such persons and on such terms and conditions as they may determine.
5. The certificate of title to share shall be issued under the Seal of the Company, and signed by the General Manager or some other persons nominated by Board of Directors. If the share certificate is defaced, lost or destroyed, it may be renewed on payment of such fee, if any, and on such terms, if any, as to evidence and indemnity as the Directors may think fit. The legal representative of a deceased member shall be recognized by the Directors.

6. The Directors may, from time to time make call upon the members in respect of any money unpaid on their shares, and each member shall be liable to pay the amount of every call so made upon him to the persons, and at the times and places appointed by the Directors. A call may be made payable by instalments or may be revoked or postponed as the Directors may determine.

DIRECTORS

7. Unless otherwise determined by a General Meeting the number of Directors shall not be less than (2) and not more than (50).

The First Directors shall be:-

(1) U Maung Kyay @ Tee Kar Kway (2) U Than Myint @ Khaw Tin Eain

8. The Directors may from time to time appoint one of their body to the office of the Managing Director for such terms and at such remuneration as they think fit and he shall have all the powers delegated to him by the Board of Directors from time to time.
9. The qualification of Director shall be the holding of at least (-) shares in the Company in his or her own name and it shall be his duty to comply with the provision of Section (85) of the Myanmar Companies Act.
10. The Board of Directors may in their absolute and uncontrolled discretion refuse to register any proposed transfer of shares without assigning any reason.

PROCEEDINGS OF DIRECTORS

11. The Director may meet together for the despatch of business, adjourn and otherwise regulate their meeting as they think fit and determine the quorum necessary for the transaction of business. Unless otherwise determined, two shall form a quorum. If any question arising at any meeting the Managing Director's decision shall be final. When any matter is put to a vote and if there shall be an equality of votes, the Chairman shall have a second or casting vote.
12. Any Director may at any time summon a meeting of Directors.
13. A resolution in writing signed by all the Directors shall be as effective for all purposes as a resolution passed out at meeting of the Directors, duly called, held and constituted.

POWERS AND DUTIES OF DIRECTORS

14. Without prejudice to the general power conferred by Regulation 71 of the Table "A" of the Myanmar Companies Act, it is hereby expressly declared that the Directors shall have the following powers, that is to say power;-
- (1) To purchase or otherwise acquire for the Company any property, rights or privileges which the Company is authorized to acquire at such price, and generally on such terms and conditions as they think fit: also to sell, lease, abandon or otherwise deal with any property, rights or privileges to which the Company may be entitled, on such terms and conditions as they may think fit.
 - (2) To raise, borrow or secure the payment of such sum or sums in such manner and upon such terms and conditions in all respects as they think fit and in particular by the issue of debentures or debenture stocks of the Company charged upon all or any part of the property of the Company (both present and future) including its uncalled capital for the time being,
 - (3) At their discretion, to pay for any rights acquired or services rendered to the Company, either wholly or partially in cash or in shares, bonds, debentures or other securities of the Company and any such shares may be issued either as fully paid up or with such amount credited as paid up there on as may be agreed upon; and any such bonds, debentures or other securities may be either specifically charged up on all or any part of the property of the Company and its uncalled capital or not so charged.
 - (4) To secure the fulfillment of any contract or engagement entered into by the Company by mortgage or charge upon all or any of the property of the Company and its uncalled capital for the time being or by granting calls on shares or in such manner as they may think fit.
 - (5) To appoint at their discretion, remove or suspend such Managers, Secretaries, Officers, Clerks, Agents and Servants for permanent, temporary or special services as they may from time to time think fit and, to determine their duties and powers and fix their salaries or emoluments and to require security in such instances in such amount as they think fit and to depute any officers of the Company to do all or any of these things on their behalf.
 - (6) To appoint a Director as Managing Director, General Manager, Secretary or Departmental Manager in conjunction with his Directorship of the Company.

- (7) To accept from any member on such terms and conditions as shall be agreed on the surrender of his shares or any part thereof.
- (8) To appoint any person or persons to accept and hold in trust for the Company any property belonging to the Company or in which it is interested or for any other purposes and to execute and do all such deeds and things as may be requisite in relation to any such trust.
- (9) To institute , conduct , defend of abandon any legal proceedings by or against the Company or its officers or otherwise concerning the affairs of the Company and also to compound and allow time for payment or satisfaction of any debts due to or of any claims and demands by or against the Company.
- (10) To refer claims and demands by or against the Company to arbitration and to observe and perform the awards.
- (11) To make and give receipts, releases and other discharges for money payable to the Company and for the claims and demands of the Company.
- (12) To act on behalf of the Company in all matters relating to bankruptcy and insolvency.
- (13) To determine who shall be entitled to sign bills of exchange, cheques, promissory notes, receipts, endorsements, releases contracts and documents for or on behalf of the Company.
- (14) To invest, place on deposit and otherwise deal with any of the moneys of the Company not immediately required for the purpose thereof , upon securities or without securities and in such manners as the Directors may think fit, and from time to time vary or realize such investments.
- (15) To execute in the name and on behalf of the Company in favour any Director or other person who may incur or be about to incur any personal liability for the benefit of the Company, such mortgages of the Company's property (present and future) as they think fit and any such mortgage may contain a power of sale and such other powers, covenants and provisions as shall be agreed on.
- (16) To give any officer or other person employed by the Company a commission on the profits of any particular business or transaction or a share in the general profit of the Company and such commission or share of profit shall be treated as part of the working expenses of the Company.

- (17) From time to time, to make, vary and repeal bye- laws for the regulation of the business of the Company, the officers and servants or the members of the Company or any section thereof.
 - (18) To enter into all such negotiations and contracts and rescind and vary all such contracts and execute and do all such acts , deeds and things in the name and on behalf of the Company as they may consider expedient for or in relation to any of the matter aforesaid or otherwise for the purposes of the Company.
 - (19) To borrow money for the benefit of the Company's business from any person, firm or company or bank or financial organization of local and abroad in the manner that the Directors shall think fit .
15. A general meeting shall be held within eighteen months from the date of its incorporation and thereafter at least once in every calendar year at such time (not being more than fifteen months after the holding of the last preceding general meeting) and places as may be fixed by the Board of Directors. No business shall be transacted at any general meeting unless a quorum of members is presented at the time when the meeting proceeds to business, save as herein otherwise provided Member holding not less than 50 percent of the issued shares capital (not less than two members) personally present, shall form a quorum for all purposes. And if and when in the case of there are only two number of members in the Company, those two members shall form a quorum.

DIVIDENDS

16. The Company in general meeting may declare a dividend to be paid to the members, but no dividend shall exceed the amount recommended by the Directors .No dividends shall be paid otherwise than out of the profits of the year or any other undistributed profits.

OFFICE STAFF

17. The Company shall maintain an office establishment and appoint a qualified person as General Manager and other qualified persons as office-staffs .The remunerations and allowances such as salaries , travelling allowances and other expenditures incidental to the business shall be determined by the Board of Directors, and approved by the general meeting .The General Manager shall be responsible for the efficient operation of the office in every respect and shall be held accountable at all times to the Managing Director.

ACCOUNTS

18. The Directors shall cause to be kept proper books of account with respect to:-
- (1) *all sums of money received and expended by the Company and the matters in respect of which the receipts and expenditures take place;*
 - (2) *all sales and purchases of goods by the Company ;*
 - (3) *all assets and liabilities of the Company.*
19. The books of account shall be kept at the registered office of the Company or at such other place as the Directors shall think fit and shall be opened to inspection by the Directors during office hours.

AUDIT

20. Auditors shall be appointed and their duties regulated in accordance with the provisions of the Myanmar Companies Act or any statutory modifications thereof for the time being in force.

NOTICE

21. A notice may be given by the Company to any member either personally or sending it by post in a prepaid letter addressed to his registered address.

THE SEAL

22. The Directors shall provide for the safe custody of the Seal, and the Seal shall never be used except by the authority of the Directors previously given, and in the presence of one Director at least, who shall sign every instrument to which the Seal is affixed.



INDEMNITY

23. Subject to the provisions of Section 86 (C) of the Myanmar Companies Act and the existing laws, every Director, Auditor, Secretary or other officers of the Company shall be entitled to be indemnified by the Company against all costs, charges, losses, expenses and liabilities incurred by him in the execution and discharge of the duties or in relation thereto.

WINDING - UP


24. Subject to the provisions contained in the Myanmar Companies Act and the statutory modification thereupon, the Company may be wound up voluntarily by the resolution of General Meeting.

We, the several persons, whose names, nationalities, addresses and descriptions are subscribed below, are desirous of being formed into a Company in pursuance of this Articles of Association, and we respectively agree to take the number of shares in the Capital of the Company set opposite our respective names.

Sr. No.	Name, Address and Occupation of Subscribers	Nationality & N.R.C No.	Number of Shares taken	Signatures
1	U Maung Kyay @ Tee Kar Kway Merchant No.(C/4), Pin Shwe Nyung Street, Tamwe Kalay Ward, Tamwe Township, YANGON	12/LATHANA(NAING)018174	10000	
2	U Than Myint @ Khaw Tin Eain Merchant No.(45-A), Pyay Road, 11-Ward, Hlaing Township, YANGON	12/LAMATA(NAING)027772	10000	

Dated 04 the 02 day of 2015

It is hereby certified that the persons mentioned above put their signatures in my presence.


Daw Khin Win Yi
B.Com (A.A) C.P.A
Registered Accountant, Auditor
Financial Consultant

FINANCIAL STATEMENTS
OF
NATIONAL INFRASTRUCTURE HOLDINGS
COMPANY LIMITED
FOR THE FINANCIAL YEAR ENDED MARCH 31, 2016.

REPORT OF THE AUDITOR
STATEMENT OF THE DIRECTORS
STATEMENT OF FINANCIAL POSITION
STATEMENT OF COMPREHENSIVE INCOME
NOTES TO THE FINANCIAL STATEMENTS

NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

AUDIT REPORT

FOR THE FINANCIAL YEAR 2015 - 2016.

CONTENT	PAGE
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Statement of Director	
Statement of Financial Position	1
Statement of Comprehensive Income	2
Statement of Cash Flow	3
Statement of Changes in Shareholder's Equity	4
Notes to the Financial Statements	5~7
Property & Equipment and Depreciation- <i>Schedule-1</i>	8
Summary Cash Statement- <i>Schedule-2</i>	9



WIN GROUP
CERTIFIED PUBLIC ACCOUNTANTS

No. 55, Ground Floor, 12th St. Lanmadaw T/S, Yangon
Phone : 09-732-15959, 09-506-5857
Email : wingroup.cpa@gmail.com

AUDITOR'S REPORT

The Board of Directors

NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED


We have audited the accompanying Statement of Financial Position of **National Infrastructure Holdings Company Limited** as of March 31, 2016 and the related Statement of Comprehensive Income for the year then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing practices. Those practices require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosure in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by the management, as well as evaluating the overall financial statements presentation. We believe that our audit provides a reasonable basis for our opinion.

In accordance with Section 145 (1) (2) of The Myanmar Companies Act we report that we have obtained all the information and explanations we have required.

In our opinion, according to the best of our knowledge and belief and the explanation given to us and as shown by the books of the Company, which have been maintained in accordance with Section 130 of the Act, the Statement of Financial Position and the relative Statement of Comprehensive Income are in conformity with the law and properly drawn up so as to exhibit a true and fair view of the state of affairs of the Company as of March 31, 2016.

Dated: **20 JAN 2017**


(WIN-NAING)
B.Com (A-A), C.P.A.
Certified Public Accountant



NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

NO.(44), THEIN PHYU ROAD, CORNER OF THEIN PHYU ROAD AND BOGYOKE AUNG SAN ROAD, PAZUNDAUNG TOWNSHIP, YANGON, MYANMAR, TEL: (95-1) 8610654, 8610656~59, 8610726~28 FAX: (95-1) 200273, 295067.

Statement by Director's Pursuant to Section 133 (1)(2)

We, being Managing Director and Directors of NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED, do hereby state, in the opinion:

(a) the Financial Statements, together with the necessary explanations, thereto, set out on the attachments, are drawn up so as to give a true and fair view of the statement of affairs of the Company as at March 31, 2016 and of the result and changes in financial position of the Company for the year ended March 31, 2016.

(b) at the date of this statement, there is reasonable grounds and to believe that the Company will be able to pay its debts as and when they fall due.

On behalf of the board of Directors

MAUNG KYAY
MANAGING DIRECTOR
NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD.

Dated: 20 JAN 2017

THAN MYINT
DIRECTOR
NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD.



NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED**STATEMENT OF FINANCIAL POSITION**

AS AT MARCH 31, 2016.

	Note	2015-2016	2014-2015
		MMK	MMK
PROPERTY & ASSETS			
NON-CURRENT ASSETS			
Property and Equipment	2	7,107,425.00	7,720,775.00
Receivable	3	19,114,780,821.92	-
CURRENT ASSETS			
Cash at Bank	4	110,050.00	100,050.00
Cash in Hand	5	12,828,309,200.00	1,990,397,900.00
TOTAL PROPERTY & ASSETS		31,950,307,496.92	1,998,218,725.00
EQUITY AND LIABILITIES			
SHAREHOLDER'S EQUITY			
Authorized Share Capital			
3,000,000 Shares @ K 100,000 each/-	6	300,000,000,000.00	300,000,000,000.00
Issued & Paid Up Share Capital			
128,460 Shares @ K 100,000 each/-	7	12,846,000,000.00	2,000,000,000.00
Retained Earning			
Balance at Start of Year		(1,931,275.00)	-
Net Loss for the Year		(8,692,050.00)	(1,931,275.00)
NON-CURRENT LIABILITIES			
Bank Loan and Overdraft-MEB	8	19,000,000,000.00	
CURRENT LIABILITIES			
Provision Expenses	9	114,930,821.92	150,000.00
TOTAL EQUITY & LIABILITIES		31,950,307,496.92	1,998,218,725.00

MAUNG KYAY
MANAGING DIRECTOR
NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD.



THAN MYINT
DIRECTOR
NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD.

NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

STATEMENT OF COMPREHENSIVE INCOME

FOR THE FINANCIAL YEAR ENDED MARCH 31, 2016.

	Note	2015-2016	2014-2015
		MMK	MMK
Income			
Income		-	-
(Less) Administration Expenses	10	(8,692,050.00)	(1,931,275.00)
Net Loss for the Year		(8,692,050.00)	(1,931,275.00)



NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED**STATEMENT OF CASH FLOW****FOR THE FINANCIAL YEAR ENDED MARCH 31, 2016.**

	2015-2016	2014-2015
Cash flows from operating activities	MMK	MMK
Profit for the year-before tax	(8,692,050.00)	(1,931,275.00)
Adjustments for		-
Depreciation of property, plant and equipment	613,350.00	102,225.00
Amortization of intangibles	-	-
Gain on sales of equipment	-	-
Operating profit before working capital changes	(8,078,700.00)	(1,829,050.00)
Decrease (Increase) in trade and other receivables	-	-
Decrease (Increase) in long term loan	(19,114,780,821.92)	-
Decrease (Increase) in inventories	-	-
Increase (Decrease) in trade payables	-	-
Increase payables	114,780,821.92	150,000.00
Cash generated from operating	(19,008,078,700.00)	(1,679,050.00)
Interest paid	-	-
Income tax paid	-	-
Proceeds from extraordinary items	-	-
Net Cash from operating activities	(19,008,078,700.00)	(1,679,050.00)
Cash flows from investing activities		
Proceeds from sales of equipment	-	-
Purchases of property, plant & equipment	-	(7,823,000.00)
Dividend received	-	-
Net Cash provided (used) in investing activities	-	(7,823,000.00)
Cash flows from financing activities		
Proceeds from issuance of share capital	10,846,000,000.00	2,000,000,000.00
Proceeds/payment from long-term borrowings	19,000,000,000.00	
Payment of finance lease liabilities	-	
Net cash provided (used) in financing activities	29,846,000,000.00	2,000,000,000.00
Net increase (decrease) in cash and cash equivalents	10,837,921,300.00	1,990,497,950.00
Cash and cash equivalents at beginning of year	1,990,497,950.00	-
Cash and cash equivalents at end of year	12,828,419,250.00	1,990,497,950.00

MAUNG KYAY
MANAGING DIRECTOR
NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD.



THAN MYINT
DIRECTOR
NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD.

(3)

NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

STATEMENT OF CHANGES IN SHAREHOLDER'S EQUITY

FOR THE FINANCIAL YEAR ENDED MARCH 31, 2016.

		2015-2016	2014-2015
		MMK	MMK
Issued and Paid Up Share Capital			
20,000 Shares @ MMK 100,000 each/-		2,000,000,000.00	2,000,000,000.00
Add-		10,846,000,000.00	
during the year 108,460 @ MMK 100,000 each/-			
TOTAL	[1]	12,846,000,000.00	2,000,000,000.00
Retained Earning			
Balance at Beginning of Year		(1,931,275.00)	-
Net Profit /(Loss) for the Year		(8,692,050.00)	(1,931,275.00)
TOTAL	[2]	(10,623,325.00)	(1,931,275.00)
Balance at End of Year	[1+2]	12,835,376,675.00	1,998,068,725.00



NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

NOTES TO THE FINANCIAL STATEMENTS

FOR THE FINANCIAL YEAR 2015 - 2016.

NOTE (1) COMPANY BACKGROUND

A. Incorporation

Company was incorporated under the Union of Myanmar Companies Act and granted the Incorporation Certificate No.5517 / 2014-2015 dated February 10, 2015 of Directorate of investment and Company Administration, Ministry of National Planning and Economic Development.

B. Line of Business

The principal activity of the company is to carry out all type of business.

NOTE (2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Basic of Accounting

The financial statements have been prepared in accordance with Myanmar Financial Reporting Standard (MFRSs) and are based on the historical cost convention.

B. Accounting Period

The accounting year is from April 1, 2015 to March 31, 2016.

C. Property, Plant & Equipment

Property and equipment are stated at cost less accumulated depreciation. Depreciation is provided to write off the cost of all items of property and equipment over their estimated useful lives, using the straight-line method, at the following annual rate:

Furniture & Fixture	5%
Office Equipment	10%
Computer & Accessories	10%

Tangible assets are stated at *Schedule-1*.

D. Cash and Cash Equivalents

Cash and cash equivalents comprise cash in hand and deposits with various local banks.

NOTE (3) RECEIVABLE

The amount receivable from Oriental Highway Company Limited.

NOTE (4) CASH AT BANK

Company opened the bank A/C No. 061-103-06100926501 in Kanbawza Bank and Myanmar Economic Bank A/C No. the amount balances of cash at bank were MMK 100,050/- and MMK 10,000/- as of March 31, 2016. Bank balances have been reconciled with the respectively Bank Statements.



NOTE (5) CASH IN HAND

The amount balance of cash in hand at March 31, 2016 was confirmed by the management.

NOTE (6) AUTHORIZED SHARE CAPITAL

According to the Memorandum of Association and Article of Association, details are as follows:-

	MMK
3,000,000 Shares @ MMK 100,000 /-each	300,000,000,000.00

NOTE (7) ISSUED AND PAID UP SHARE CAPITAL

According to the Form VI dated 6th March, 2015 and 30th March, 2016 issued and paid up are as follows:-

	MMK
128,460 Shares @ MMK 100,000/- each	12,846,000,000.00

NOTE (8) MEB LOAN

The loan amount borrowed from Myanmar Economic Bank. The Company has to pay 13 % interest per year.

NOTE (9) PROVISION EXPENSES

The amount comprised as follows:-

	MMK
The amount provided for legal and audit fee	150,000.00
Interest on MEB Loan	114,780,821.92
TOTAL	114,930,821.92



NOTE (10) ADMINISTRATION EXPENSES

The amount comprised as follows:-

	2015-2016	2014-2015
	MMK	MMK
Salaries & Wages	7,200,000.00	
Company registration fees	-	1,000,000.00
Company formation expenses	-	150,000.00
UMFCCI registration fee	-	208,000.00
Stamp duty	2,700.00	200,000.00
Cheque book charges	-	50.00
Telecommunication	120,000.00	20,000.00
Electricity	300,000.00	50,000.00
Miscellaneous	306,000.00	51,000.00
Depreciations	613,350.00	102,225.00
Provision for Legal & Audit fees	150,000.00	150,000.00
TOTAL	8,692,050.00	1,931,275.00



NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

PROPERTY & EQUIPMENT AND DEPRECIATION SCHEDULE

FOR THE FINANCIAL YEAR ENDED MARCH 31, 2016.

Schedule - 1

Particulars	AT Cost 31.03.2016	Depreciation				Net Book Value 31.03.2016
		Rate %	Opening 01.04.2015	for the Year	Total 31.03.2016	
Furniture & Fixture	MMK 3,379,000	5	MMK 28,158.00	MMK 168,950	MMK 197,108	MMK 3,181,892
Office Equipment	1,600,000	10	26,667.00	160,000	186,667	1,413,333
Computer & Accessories	2,844,000	10	47,400.00	284,400	331,800	2,512,200
TOTAL	7,823,000		102,225.00	613,350	715,575	7,107,425



NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

SUMMARY CASH STATEMENT

Schedule - 2

FOR THE FINANCIAL YEAR ENDED MARCH 31, 2016.

PARTICULARS	MMK	MMK
Receipts		
Opening balance		1,990,397,900.00
Capital Contribute		<u>10,846,000,000.00</u>
		12,836,397,900.00
Payments		
Salaries & Wages	7,200,000.00	
Stamp Duty	2,700.00	
Opening bank current A/C MEB	10,000.00	
Telecommunication	120,000.00	
Electricity	300,000.00	
Miscellaneous	306,000.00	
Legal & Audit Fee (2014-2015)	150,000.00	(8,088,700.00)
Balance at March 31, 2016.		<u>12,828,309,200.00</u>



FINANCIAL STATEMENTS
OF
NATIONAL INFRASTRUCTURE HOLDINGS
COMPANY LIMITED
FOR THE FINANCIAL YEAR ENDED MARCH 31, 2015.

REPORT OF THE AUDITOR
STATEMENT OF THE DIRECTORS
STATEMENT OF FINANCIAL POSITION
STATEMENT OF COMPREHENSIVE INCOME
NOTES TO THE FINANCIAL STATEMENTS

NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

AUDIT REPORT

FOR THE FINANCIAL YEAR 2014 - 2015.

CONTENT	PAGE
Auditor's Report	
Statement of Director	
Statement of Financial Position	1
Statement of Comprehensive Income	2
Statement of Cash Flow	3
Statement of Changes in Shareholder's Equity	4
Notes to the Financial Statements	5-6
Property & Equipment and Depreciation- <i>Schedule-1</i>	7
Summary Cash Statement- <i>Schedule-2</i>	8



WIN GROUP
CERTIFIED PUBLIC ACCOUNTANTS

No. 55, Ground Floor, 12th St. Lanmadaw T/S, Yangon
Phone : 09-732-15959, 09-506-5857
Email : wingroup.cpa@gmail.com

AUDITOR'S REPORT

The Board of Directors

NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

We have audited the accompanying Statement of Financial Position of National Infrastructure Holdings Company Limited as of March 31, 2015 and the related Statement of Comprehensive Income for the year then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing practices. Those practices require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosure in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by the management, as well as evaluating the overall financial statements presentation. We believe that our audit provides a reasonable basis for our opinion.

In accordance with Section 145 (1) (2) of The Myanmar Companies Act we report that we have obtained all the information and explanations we have required.

In our opinion, according to the best of our knowledge and belief and the explanation given to us and as shown by the books of the Company, which have been maintained in accordance with Section 130 of the Act, the Statement of Financial Position and the relative Statement of Comprehensive Income are in conformity with the law and properly drawn up so as to exhibit a true and fair view of the state of affairs of the Company as of March 31, 2015.

Dated: 20 JAN 2017


(WIN NAING)
B.Com (A-A), C.P.A
Certified Public Accountant



NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

NO.(36), THEINPHYU ROAD, PAZUNDAUNG TOWNSHIP, YANGON, MYANMAR.
TEL: (95-1) 8610654, 8610656~59, 8610726~28 FAX : (95-1) 200273, 295067

Statement by Director's Pursuant to Section 133 (1)(2)

We, being Managing Director and Directors of NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED, do hereby state, in the opinion:

(a) the Financial Statements, together with the necessary explanations, thereto, set out on the attachments, are drawn up so as to give a true and fair view of the statement of affairs of the Company as at March 31, 2015 and of the result and changes in financial position of the Company for the year ended March 31, 2015.

(b) at the date of this statement, there is reasonable grounds and to believe that the Company will be able to pay its debts as and when they fall due.

On behalf of the board of Directors

MAUNG KYAY
MANAGING DIRECTOR
NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD

THAN MYINT
DIRECTOR
NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD.

Dated: 20 JAN 2017



NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

STATEMENT OF FINANCIAL POSITION

AS AT MARCH 31, 2015.

	Note	MMK
PROPERTY & ASSETS		
NON-CURRENT ASSETS		
Property and Equipment	2	7,720,775.00
CURRENT ASSETS		
Cash at Bank	3	100,050.00
Cash in Hand	4	1,990,397,900.00
TOTAL PROPERTY & ASSETS		1,998,218,725.00
EQUITY AND LIABILITIES		
SHAREHOLDER'S EQUITY		
Authorized Share Capital		
3,000,000 Shares @ K 100,000 each/-	5	300,000,000,000.00
Issued & Paid Up Share Capital		
20,000 Shares @ K 100,000 each/-	6	2,000,000,000.00
Retained Earning		
Balance at Start of Year		-
Net Loss for the Year		(1,931,275.00)
CURRENT LIABILITIES		
Provision Expenses	7	150,000.00
TOTAL EQUITY & LIABILITIES		1,998,218,725.00



MAUNG KYAY
MANAGING DIRECTOR
NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED



THAN MYINT
DIRECTOR
NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

(1)

NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

STATEMENT OF COMPREHENSIVE INCOME

FOR THE FINANCIAL YEAR ENDED MARCH 31, 2015.

PARTICULARS	MMK	MMK
Income		
Income		
(Less) Administration Expenses		
Company registration fees	1,000,000.00	
Company formation expenses	150,000.00	
UMFCCI registration fee	208,000.00	
Stamp duty	200,000.00	
Cheque book charges	50.00	
Telecommunication	20,000.00	
Electricity	50,000.00	
Miscellaneous	51,000.00	
Depreciations	102,225.00	
Provision for Legal & Audit fees	150,000.00	(1,931,275.00)
Net Loss for the Year		(1,931,275.00)



NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

STATEMENT OF CASH FLOW

FOR THE FINANCIAL YEAR ENDED MARCH 31, 2015.

	MMK
Cash flows from operating activities	
Profit for the year before tax	(1,931,275.00)
Adjustments for	
Depreciation of property, plant and equipment	102,225.00
Amortization of intangibles	-
Gain on sales of equipment	-
Operating profit before working capital changes	(1,829,050.00)
Decrease (Increase) in trade and other receivables	-
Decrease (Increase) in inventories	-
Increase (Decrease) in trade payables	150,000.00
Increase payables	-
Cash generated from operating	(1,679,050.00)
Interest paid	-
Income tax paid	-
Proceeds from extraordinary items	-
Net Cash from operating activities	(1,679,050.00)
Cash flows from investing activities	
Proceeds from sales of equipment	-
Purchases of property, plant & equipment	(7,823,000.00)
Dividend received	-
Net Cash provided (used) in investing activities	(7,823,000.00)
Cash flows from financing activities	
Proceeds from issuance of share capital	2,000,000,000.00
Proceeds/payment from long-term borrowings	-
Payment of finance lease liabilities	-
Net cash provided (used) in financing activities	2,000,000,000.00
Net increase (decrease) in cash and cash equivalents	1,990,497,950.00
Cash and cash equivalents at beginning of year	-
Cash and cash equivalents at end of year	1,990,497,950.00

MAUNG KYAY
MANAGING DIRECTOR
NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD.



THAN MYINT
DIRECTOR
NATIONAL INFRASTRUCTURE HOLDINGS CO., LTD.

NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

STATEMENT OF CHANGES IN SHAREHOLDER'S EQUITY

FOR THE FINANCIAL YEAR ENDED MARCH 31, 2015.

		MMK
Issued and Paid Up Share Capital		
20,000 Shares @ K 100,000 each/-		2,000,000,000.00
TOTAL	[1]	2,000,000,000.00
Retained Earning		
Balance at Beginning of Year		-
Net Profit / (Loss) for the Year		(1,931,275.00)
TOTAL	[2]	(1,931,275.00)
Balance at End of Year	[1+2]	1,998,068,725.00



NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

NOTES TO THE FINANCIAL STATEMENTS

FOR THE FINANCIAL YEAR 2014 - 2015.

NOTE (1) COMPANY BACKGROUND

A. Incorporation

Company was incorporated under the Union of Myanmar Companies Act and granted the Incorporation Certificate No.5517 / 2014-2015 dated February 10, 2015 of Directorate of investment and Company Administration, Ministry of National Planning and Economic Development.

B. Line of Business

The principal activity of the company is to carry out all type of business.

NOTE (2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Basic of Accounting

The financial statements have been prepared in accordance with Myanmar Financial Reporting Standard (MFRSs) and are based on the historical cost convention.

B. Accounting Period

The accounting year is from April 1, 2014 to March 31, 2015.

C. Property & Equipment

Property and equipment are stated at cost less accumulated depreciation. Depreciation is provided to write off the cost of all items of property and equipment over their estimated useful lives, using the straight-line method, at the following annual rate:

Furniture & Fixture	5%
Office Equipment	10%
Computer & Accessories	10%

Tangible assets are stated at *Schedule-1*

D. Cash and Cash Equivalents

Cash and cash equivalents comprise cash in hand and deposits with various local banks.



NOTE (3) CASH AT BANK

Company opened the bank A/C No. 061-103-06100926501 in Kanbawza Bank and the amount balance of cash at bank was MMK 100,050/- as of March 31, 2015. Bank balance has been reconciled with the Bank Statement.

NOTE (4) CASH IN HAND

The amount balance of cash in hand at March 31, 2015 was confirmed by the management.

NOTE (5) AUTHORIZED SHARE CAPITAL

According to the Memorandum of Association and Article of Association, details are as follows:-

	MMK
3,000,000 Shares @ MMK 100,000 /-each	300,000,000,000.00

NOTE (6) ISSUED AND PAID UP SHARE CAPITAL

According to the Form VI dated 6th March , 2015 issued and paid up capital as follows:-

	MMK
20,000 Shares @ MMK 100,000 /-each	2,000,000,000.00

NOTE (7) PROVISION EXPENSES

The amount provided for legal and audit fee.



NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

PROPERTY & EQUIPMENT AND DEPRECIATION SCHEDULE

FOR THE FINANCIAL YEAR ENDED MARCH 31, 2015.

Schedule - 1

Particulars	AT Cost 31.03.2015	Depreciation				Net Book Value 31.03.2015
		Rate %	Opening 01.04.2014	for the Year	Total 31.03.2015	
	MMK		MMK	MMK	MMK	MMK
Furniture & Fixture	3,379,000	5	-	28,158	28,158	3,350,842
Office Equipment	1,600,000	10	-	26,667	26,667	1,573,333
Computer & Accessories	2,844,000	10	-	47,400	47,400	2,796,600
TOTAL	7,823,000		-	102,225	102,225	7,720,775



NATIONAL INFRASTRUCTURE HOLDINGS COMPANY LIMITED

SUMMARY CASH STATEMENT

Schedule - 2

FOR THE FINANCIAL YEAR ENDED MARCH 31, 2015.

PARTICULARS	MMK	MMK
Receipts		
Capital Contribute		2,000,000,000.00
Payments		
Company Registration Fees	1,000,000.00	
Company Formation Expenses	150,000.00	
UMFCCI Registration Fee	208,000.00	
Stamp Duty	200,000.00	
Opening bank current A/C KBZ	100,100.00	
Telecommunication	20,000.00	
Electricity	50,000.00	
Miscellaneous	51,000.00	
Purchase of assets	7,823,000.00	(9,602,100.00)
Balance at March 31, 2015.		1,990,397,900.00





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ပြည်ထောင်စုယန္တရားပြန်မာနိုင်ငံတော်တရားရုံး
တရားရုံးချုပ်နှင့် စီးပွားရေးနှင့် ဖွံ့ဖြိုးတိုးတက်မှုဝန်ကြီးဌာန
ကုမ္ပဏီမှတ်ပုံတင်ဓာတ်မှတ်

စာရင်း ၆၆၈ / ၂၀၀၁ - ၂၀၀၂

ပြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေအရ မြန်မာစာတုပဒေနှင့်စက်ပစ္စည်း ကုမ္ပဏီ လီမိတက်
.....အား စေးရန်ဘာဝန် ကန့်သတ်ထားသော လီမိတက်
ကုမ္ပဏီအဖြစ် ၂၀၀၁ ခုနှစ်၊ အောက်တိုဘာ ၂ ရက်နေ့တွင် မှတ်ပုံတင်ထားခြင်းအား
၂၀၁၃ ခုနှစ်၊ ဇန်နဝါရီလ ၁၁ ရက်နေ့မှစ၍ ထက်သန်တိုး ခွင့်ပြုလိုက်သည်။

Handwritten signature

ညွှန်ကြားရေးမှူးချုပ်(ကိုယ်စား)

(နန်းလှိုင်သန်း၊ ညွှန်ကြားရေးမှူး)

ရင်းနှီးမြှုပ်နှံမှုနှင့်ကုမ္ပဏီများညွှန်ကြားမှုဦးစီးဌာန

THE GOVERNMENT OF THE REPUBLIC OF THE UNION OF MYANMAR
MINISTRY OF NATIONAL PLANNING AND ECONOMIC DEVELOPMENT

CERTIFICATE OF INCORPORATION

NO.668..... of 2001-2002

I hereby certify that the tenure of MYANMAR CHEMICAL & MACHINERY
.....COMPANY LIMITED..... incorporated under the
Myanmar Companies Act on 2nd OCTOBER, 2001
is renewed with effect from 5th SEPTEMBER, 2013

Handwritten signature

For Director General


(Nang Yi Yi Thun, Director)

Directorate of Investment and Company Administration

ကုမ္ပဏီနှင့်သက်ဆိုင်သည့်အချက်အလက်များ

- (က) အုပ်ချုပ်မှုဒါရိုက်တာအမည်၊ ဦးအောင်လှိုင်ဦး (၁၂/လမတ(နိုင်)၀၂၅၅၉၇)
- (ခ) ကုမ္ပဏီ ရုံးခန်းလိပ်စာ၊ အမှတ်(၁၁၂၀/၁၁၂၁)၊ သုံမင်္ဂလာလမ်း၊ (၁၆/၄)ရပ်ကွက်၊
သင်္ဃန်းကျွန်းမြို့နယ်၊ ရန်ကုန်မြို့။
- (ဂ) ဆက်သွယ်ရန် မုန်းနံပါတ်၊ ၀၁-၅၆၂၀၂၀
- (ဃ) ဒါရိုက်တာများ အမည်စာရင်း၊ ၁။ ဒေါ်ခင်နွယ်မာထွန်း
၁၃/ကတန(နိုင်)၀၀၂၆၉၈
၂။ ဦးမင်းဟန်
၁၂/ပတေ(နိုင်)၀၂၅၉၈၂

- မှတ်ချက် ။
- (၁) ဤကုမ္ပဏီမှတ်ပုံတင်လက်မှတ်သည်မှတ်ပုံတင်ရက်စွဲ၊ ၁-၈-၂၀၁၃)မှ (၃၁-၇-၂၀၁၈)ရက်နေ့အထိ(၅)နှစ်သက်တမ်းအတွက်သာ ဖြစ်သည်။ သက်တမ်း မကုန်ဆုံးမီ (၃)လအလိုတွင် သက်တမ်းတိုးရန် ရင်းနှီးမြှုပ်နှံမှုနှင့် ကုမ္ပဏီများ ညွှန်ကြားမှု ဦးစီးဌာနသို့ လျှောက်ထား ရမည်။
 - (၂) ကုမ္ပဏီ အနေဖြင့် သင်းဖွဲ့မှတ်တမ်းတွင်အဆိုပြု တင်ပြထားသော လုပ်ငန်းရည်ရွယ်ချက်များကိုသာ လုပ်ကိုင်ရမည်။
 - (၃) သင်းဖွဲ့မှတ်တမ်းပါ ရည်ရွယ်ချက်များသည် သက်ဆိုင်ရာ ပြည်ထောင်စု ဝန်ကြီးဌာန၏ ထည့်သွင်းပေး၊ နည်းဥပဒေ၊ လုပ်ထုံးလုပ်နည်း များနှင့်အညီ နှိပ်ချွတ် ရရှိမှုသာ ဆောင်ရွက်ခွင့် ရှိမည် ဖြစ်ပါသည်။
 - (၄) လုပ်ငန်းရည်ရွယ်ချက် ပြောင်းလဲ လုပ်ကိုင်လိုပါက ပြောင်းလဲ လုပ်ကိုင် လိုသည့် လုပ်ငန်း ရည်ရွယ်ချက်များအား သင်းဖွဲ့မှတ်တမ်းတွင် ပြင်ဆင် မှတ်ပုံတင်ရန်အတွက် ဒါရိုက်တာအဖွဲ့(BOD)၏ အထူး အမည်အခင်း ဆုံးဖြတ်ချက် မှတ်တမ်းနှင့်အတူ ရင်းနှီးမြှုပ်နှံမှုနှင့်ကုမ္ပဏီများ ညွှန်ကြားမှု ဦးစီးဌာန သို့ လျှောက်ထား ရမည်။


 ညွှန်ကြားရေးမှူးချုပ်(ကိုယ်စား)
 (မြင့်လွင်၊ ဒုတိယညွှန်ကြားရေးမှူး)

FORM VI

022237



**RETURN OF ALLOTMENTS
THE MYANMAR COMPANIES ACT.**

(See Section 104)

(To be filed with the Registrar within one month after the allotment is made)

Return of allotment from the 15th of November, 20 2007
on the of 20 of the *

Made pursuant to Section 104 (1) **MYANMAR CHEMICAL & MACHINERY
COMPANY LIMITED**
Number of the shares allotted payable in cash 300 Shares

Nominal amount of the shares so allotted Ks. 3,000,000/-

Amount paid or due and payable on cash such share Ks. 10,000/-
(Fully Paid Up)

Number of ordinary shares allotted for a consideration other than cash

Nominal amount to be ordinary shares so allotted

Amount to be treated as paid on each such share

The consideration for which such share have been allotted is as follow :-

NOTE In making a return of allotments under Section 104 (1) the Myanmar Companies Act., it is to be noted that -

1. When a return include several allotments made on different dates, the actual date of only the first and last of such allotment should be entered at the top of the front page, and the registration of the return should be effected within one month of the first date.
2. When a return relates to one allotment only, made on one particular date, that date only should be inserted and the spaces for the second date struck out and the word made substituted for the word "From" after the word "allotments" above.

Here insert name of Company.

Distinguish between preference, ordinary, or other description of shares.

Presented for filing by :

U Aung Hsing Oo (MD)

Name, Address and Description of Allottees

Name & N.R.C No	Address	Description	Number of the shares allotted	
			Preference	Ordinary
1. U Aung Hsing Oo 12/LaMaTa(Naing) 025897	No.1120-1121, Thu Mingalar Street, 16/4 Ward, Thangayun Township, Yangon	Merchant		150
2. Daw Khin Nwe Mar Tin 13/KaTaTa(Naing) 002698	No.1120-1121, Thu Mingalar Street, 16/4 Ward, Thangayun Township, Yangon	Merchant		150
Total				300 Shares

Signature

10.6.2007

Date

FORM XXVI

PARTICULARS OF DIRECTORS, MANAGERS AND MANAGING AGENTS AND OF ANY CHANGES THEREIN

(Myanmar Companies Act, Sec Section 87)

Name of Company : MYANMAR CHEMICAL & FERTILIZER CO., LTD. Presented by : U AUNG HLAING OO

The present christian name or names of surnames	Nationality, National Registration Card No.	Usual Residential Address	Other Business Occupation	Changes
1 U AUNG HLAING OO	Myanmar 12/IsaMaTa (Hsing)025937	No.1120-1121, Thu Mingalar Street, 15/4, Ward, Thingangyun Township, Yangon.	Merchant	Managing Director
2 Daw Khin Nye Mar Tun	Myanmar 15/IsaMaTa (Hsing)025938	No.1120-1121, Thu Mingalar Street, 15/4 Ward, Thingangyun Township, Yangon.	Merchant	Director
3 U Min Han	Myanmar 12/IsaMaTa (Hsing)025932	No.157, Thibathu Street, Ward No.11, South Okkalapa Township, Yangon.	Merchant	Appointed as Director w.e.f. 12.1.2005

NOTE : (1) A complete list of the Directors or Managers or Managing Agents shown as existing in the last particulars

(2) A note of the changes since the last list should be made in the column for "Changes" by placing against the new Director's name the word "in place of" and by writing against any former Director's name the word "dead" "resigned" or as the case may be giving the date of change against the entry

Dated this 12.1.2005



Signature

Khin Nye Mar Tun

Designation

Myanmar Chemical & Fertilizer Co.

1 Name and Address of Enterprise လုပ်ငန်းအမည်နှင့်လိပ်စာ MYANMAR CHEMICAL & MACHINERY CO., LTD. NO. 1120-1121, THU MINGALAR ST, 16/4 WARD, THINGANGYUN T/S, YANGON.	4 Registration No. & Date 30 10 2001 ကြီးကြပ်အမှတ်နှင့် ရက်စွဲ
2. Contact No ဓာတ်သွယ်ရန် 566582 Telephone No. Fax No. Telex No. တယ်လီဖုန်းနံပါတ် ဖက်စ်နံပါတ် တဲလက်စ်နံပါတ်	Union of Myanmar Ministry of Commerce Directorate of Trade ပြည်ထောင်စုပြန်ယူနိုင်ငံတော်အစိုးရ စီးပွားရေးနှင့် ကူးသန်းရောင်းဝယ်ရေးဝန်ကြီးဌာန ကုန်သွယ်ရေးညွှန်ကြားမှုဦးစီးဌာန
3. Business Registration No. လုပ်ငန်းမှတ်ပုံတင်အမှတ် 668/2001-2002	CERTIFICATE OF EXPORTER/IMPORTER REGISTRATION ထုတ်ကုန်သွင်းကုန်လုပ်ငန်းရှင် မှတ်ပုံတင်သက်မှတ် Note: <input type="checkbox"/> Please tick (✓) where applicable သက်ဆိုင်ရာအကွက်ကိုအမှန် အမှတ်အသားပြုပါ
5. Type of Business လုပ်ငန်းအမျိုးအစား <input type="checkbox"/> a) Sole Proprietorship <input type="checkbox"/> b) Partnership <input type="checkbox"/> c) Limited Company <input type="checkbox"/> d) Co-operative Society (Myanmar or Foreign) တစ်ဦးတည်းပိုင် အပေါင်း လီမိတက်ကုမ္ပဏီ (ပြန်ယူ/နိုင်ငံခြား) သမဝါယမအသင်း <input type="checkbox"/> a) Others (please specify) TRADING အခြား (ဖော်ပြရန်) ကျောဘက် ပံ့ပိုး ဝန်ဆောင်မှု (၅) မျိုး နေ ဘင် ဂွက် ချင် ဂျီသစ်	
6. Terms and Conditions စည်းကမ်းချက်များ I hereby register the above mentioned enterprise as Exporter/ Importer subject to the following terms and conditions: အောက်ဖော်ပြပါစည်းကမ်းချက်များဖြင့် ထုတ်ကုန်သွင်းကုန်လုပ်ငန်းရှင်အဖြစ် မှတ်ပုံတင်ခွင့်ပြုသည်။ (a) Line of goods permitted all items except prohibited and restricted items. ခွင့်ပြုသည့်ကုန်ပစ္စည်းအမျိုးအမည် တားမြစ်ကုန်သွယ်ထားသောကုန်ပစ္စည်းအမည်များမှလွှဲ၍ ကုန်ပစ္စည်းများအားလုံး (b) The enterprise must abide by the Export/Import Rules and Regulations prescribed for the registered Exporters/Importers. လုပ်ငန်းရှင်သည်မှတ်ပုံတင်ထုတ်ကုန်သွင်းကုန် လုပ်ငန်းလုပ်ကိုင်သူများ လိုက်နာရမည့် စည်းကမ်းချက်များကို လိုက်နာရမည်။ (c) The registration is valid for THREE year(s) up to 30-10-2001 TO 29-10-2004 မှတ်ပုံတင်သက်တမ်း နှစ် ခုထိ For DIRECTOR GENERAL ညွှန်ကြားရေးမှူးချုပ်(ကိုယ်စား) Stamp ရုံးတံဆိပ်	
7. Extension of Export/ Import Registration Period ထုတ်ကုန် သွင်းကုန်လုပ်ငန်း လုပ်ငန်းရှင်မှတ်ပုံတင်အား သက်တမ်းတိုးမြှင့်ပေးခြင်း Period Extended သက်တမ်းတိုးမြှင့်သည့်ကာလ (1) 30-10-2004 up to 29-10-2005 (2) 30-4-2005 up to 31-7-2007 (3) 30-5-2008 up to 31-7-2009 (Co Reg - သက်တမ်းတိုးခြင်း) AUNG SOE DEPUTY DIRECTOR TEAN EI - ASSISTANT DEPUTY ZAW DEPUTY DIRECTOR	

ဆက်သွယ်ရေး မြှင့်တင်ရေး

(4) 28. 6. 2010 to 31. 7. 2011.1

Core မြှင့်တင်ရေး

(ဗဟိုဆက်သွယ်ရေးဌာနချုပ်)
28-6-10

မူဝါဒပြုလုပ်ငန်း

- (၁) ဓာတ်လျှပ်စစ်ဓာတ်အားစိုက် ဆေးများ
- (၂) စက်ရုံများ ပစ္စည်းများ ဖြန့်ဖြူးခြင်း ပစ္စည်းများ
- (၃) ဆေးဝါးလုပ်ငန်းများ ပစ္စည်းများ ဖြန့်ဖြူးခြင်း ဆေးများ
- (၄) လျှပ်စစ်ဖွင့်လှစ်ရေးအတွက် ပစ္စည်းများ
- (၅) အခြားဖွင့်လှစ်ရေးအတွက် ပစ္စည်းများ

(5) 19. 10. 2011 to 31. 7. 2013.1

Core မြှင့်တင်ရေး

(6) 14. 8. 2013 to 10. 9. 2014 (Contd)

(ဗဟိုဆက်သွယ်ရေးဌာနချုပ်)
19-10-11
29-10-14

(7) 13. 2. 2014 to 31. 7. 2018
Core မြှင့်တင်ရေး

(ဗဟိုဆက်သွယ်ရေးဌာနချုပ်)
25-10-18

FORM VI

022237



**RETURN OF ALLOTMENTS
THE MYANMAR COMPANIES ACT.**

(See Section 104)

(To be filed with the Registrar within one month after the allotment is made)

Return of allotment from the 15th of November, 20 2007
on the of 20 of the *

Made pursuant to Section 104 (1) **MYANMAR CHEMICAL & MACHINERY
COMPANY LIMITED**
Number of the shares allotted payable in cash 300 Shares

Nominal amount of the shares so allotted Ks. 3,000,000/-

Amount paid or due and payable on cash such share Ks. 10,000/-
(Fully Paid Up)

Number of ordinary shares allotted for a consideration other than cash

Nominal amount to be ordinary shares so allotted

Amount to be treated as paid on each such share

The consideration for which such share have been allotted is as follow :-

NOTE In making a return of allotments under Section 104 (1) the Myanmar Companies Act., it is to be noted that -

1. When a return include several allotments made on different dates, the actual date of only the first and last of such allotment should be entered at the top of the front page, and the registration of the return should be effected within one month of the first date.
2. When a return relates to one allotment only, made on one particular date, that date only should be inserted and the spaces for the second date struck out and the word made substituted for the word "From" after the word "allotments" above.

Here insert name of Company.

Distinguish between preference, ordinary, or other description of shares.

Presented for filing by :

U Aung Hsing Oo (MD)

Name, Address and Description of Allottees

Name & N.R.C No	Address	Description	Number of the shares allotted	
			Preference	Ordinary
1. U Aung Hsing Oo 12/LaMaTa(Naing) 025897	No.1120-1121, Thu Min galar Street, 16/4 Ward, Thangayun Township, Yangon	Merchant		150
2. Daw Khin Nwe Mar Tan 13/KaTaTa(Naing) 002698	No.1120-1121, Thu Min galar Street, 16/4 Ward, Thangayun Township, Yangon	Merchant		150
Total				300 Shares

Signature

10.6.2007

Date

FORM XXVI

PARTICULARS OF DIRECTORS, MANAGERS AND MANAGING AGENTS AND OF ANY CHANGES THEREIN

(Myanmar Companies Act, Sec Section 87)

Name of Company : MYANMAR CHEMICAL & MACHINERY CO., LTD.

Presented by : U AUNG HLEING OO

	The present christian name or names of surname	Nationality, National Registration Card No.	Usual Residential Address	Other Business Occupation	Changes
1	U Aung Hleing Oo	Myanmar 12/LomaTa (Haing)025897	No.1120-1121, Thu Mingalar Street, 16/4, Ward, Thingangyun Township, Yangon.	Merchant	Managing Director
2	Daw Khin Nwe Mar Tun	Myanmar 13/LomaTa (Haing)002698	No.1120-1121, Thu Mingalar Street, 16/4 Ward, Thingangyun Township, Yangon.	Merchant	Director
3	U Min Zan	Myanmar 12/PaZaTa (Haing)025962	No.167, Thihathu Street, Ward No.11, South Okkalapa Township, Yangon.	Merchant	Appointed as Director w.e.f. 12.1.2005

NOTE : (1) A complete list of the Directors or Managers or Managing Agents shown as existing in the last particulars.

(2) A note of the changes since the last list should be made in the column for "Changes" by placing against the new Director's name the word "in place of" and by writing against any former Director's name the word "dead" "resigned" or as the case may be giving the date of change against the entry.

Dated this 12.1.2005



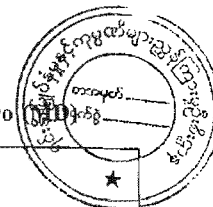
Signature *[Signature]*
 Designation *Khin Nwe Mar Tun*
Director
Myanmar Chemical & Machinery Co

FORM XXVI
PARTICULARS OF DIRECTORS, MANAGERS AND MANAGING AGENTS AND OF ANY CHANGES THEREIN
(Myanmar Companies Act, See Section 87)

Name of Company :

MYANMAR CHEMICAL & MACHINERY CO., LTD

Presented by : U Aung Hlaing Oo



	The Present Christian name or names of surnames	Nationality, National Registration Card No.	Usual Residential Address	Other Business Occupation	Changes
1.	U Aung Hlaing Oo	Myanmar 12/LaMaTa (Naing) 025897	No.1120-1121, Thu Mingalar Street, 16/4 Ward, Thingangyun Township, Yangon.	Merchant	Managing Director
2.	Daw Noe Noe Su Aung	Myanmar 12/ThaGaKa (Naing) 185395	No.1120-1121, Thu Mingalar Street, 16/4 Ward, Thingangyun Township, Yangon.	Merchant	Appointed As Director w.e.f. 19.3.2018
3.	Daw Khin Nwe Mar Tun	Myanmar 12/ThaGaKa (Naing) 002698	No.1120-1121, Thu Mingalar Street, 16/4 Ward, Thingangyun Township, Yangon.	Merchant	Resigned From Director w.e.f. 19.3.2018

NOTE :

(1) A Complete list of the Directors or Managers or Managing Agents shown as existing in the last particulars.

(2) A note of the changes since the last list should be made in the column for "Changes" by placing against the new Director's name the word "in place of" and by writing against any former Director's name the the word "dead" "resigned" or as the case may be giving the date of change against the entry.

Dated this 19.3.2018

Form (26)



Signature

Designation

U Aung Hlaing Oo
 Managing Director
 Myanmar Chemical & Machinery Co., Ltd.

မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေ

အစုရှယ်ယာများဖြင့် ပေးရန်တာဝန် ကန့်သတ်ထားသော
အများနှင့် မသက်ဆိုင်သည့်ကုမ္ပဏီ

မြန်မာ ဓါတုဗေဒ နှင့် စက်ပစ္စည်း ကုမ္ပဏီ လီမိတက်

၏

သင်းဖွဲ့မှတ်တမ်း

နှင့်

သင်းဖွဲ့စည်းမျဉ်းများ

THE MYANMAR COMPANIES ACT

PRIVATE COMPANY LIMITED BY SHARES

MEMORANDUM OF ASSOCIATION

AND

ARTICLES OF ASSOCIATION

OF

MYANMAR CHEMICAL & MACHINERY
COMPANY LIMITED

မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေ

အရရှယ်ယာများဖြင့် ဖေးရန်တာဝန် ကန့်သတ်ထားသော အများနှင့် မသက်ဆိုင်သည့်ကုမ္ပဏီ

ဥပဒေနှင့်အညီ ကုမ္ပဏီ လိမ္မော်တက်

၏

သင်းဖွဲ့မှတ်တမ်း

နှင့်

သင်းဖွဲ့စည်းချဉ်းများ

❖ ❖ ❖ ❖

THE MYANMAR COMPANIES ACT

PRIVATE COMPANY LIMITED BY SHARES

Memorandum Of Association

AND

Articles Of Association

OF

MYANMAR CEMENT & FERTILIZER COMPANY LIMITED

မြို့တော်နှင့် ဓနုဗ္ဗင်္ဂရား အနီးပေမည်

အရှေ့ရပ်တံတားမျှော်မြင့် လမ်းရန်ကုန် ကျွန်ုပ်တို့အားလုံး အမျိုးမျိုး စေတနာရှိသည့် ဂုဏ်

၂။ အထွေထွေအားဖြင့် အောက်ဖော်ပြပါအတိုင်း ဖြစ်ပေါ်ခဲ့သည်။

$$\mathcal{G}_{11}^{\mu}$$

တစ်နှစ်လုံးလုံး

- [illegible]

- (၁) အောက်ဖော်ပြပါ အစိုးရကခွင့်ပြုသော ကုန်ပစ္စည်းများနှင့် ထုတ်ကုန်များကို မိမိတစ်ဦးတည်းဖြစ်စေ မည်သည့်ပြည်တွင်း၊ ပြည်ပပုဂ္ဂိုလ်များနှင့် ဖက်ဝပ်၍ဖြစ်စေ သွင်းကုန်လုပ်ငန်းရှင်များ၊ ထုတ်ကုန်လုပ်ငန်းရှင်များ၊ လက်လံလက်ကားချောင်းချယ်မှုများ၊ ကူးသန်းရောင်းဝယ်ရေးဆိုင်ရာ လုပ်ငန်းများကိုလုပ်ကိုင်ရန်။
- (က) လယ်ယာကိုင်ကျွန်းနှင့် ဥယျာဉ်ခြံမြေထွက်ကုန်ပစ္စည်းများ၊
 - (ခ) သစ်တောထွက်ပစ္စည်းနှင့် ထပ်ဆင့်တိုးတက်ဖွံ့ဖြိုးမှု သစ်အခြေခံကုန်ပစ္စည်းများ၊
 - (ဂ) တိရစ္ဆာန်ထွက်ကုန်ပစ္စည်းနှင့် တိရစ္ဆာန်အစားအစာ၊
 - (ဃ) ရေထွက်ကုန်ပစ္စည်းများ၊
 - (င) ဓာတ်မြေဩဇာနှင့်ပိုးသတ်ဆေးများ၊
 - (စ) ဓာတုဗေဒနှင့် ဓာတ်ဆေးဆိုးဆေးများ၊
 - (ဆ) စက်ရုံသုံးပစ္စည်းများနှင့် ကုန်ကြမ်းပစ္စည်းများ၊
 - (ဇ) အိမ်သုံးကုန်ပစ္စည်းများ၊
 - (ဈ) လူသုံးကုန်ပစ္စည်းများ၊
 - (ည) ဆောက်လုပ်ရေးလုပ်ငန်းသုံးပစ္စည်းများနှင့် သုတ်ဆေးများ၊
 - (ဋ) လျှပ်စစ်နှင့်အိတ်လက်ဘရေကုန်ပစ္စည်းများ၊
 - (ဌ) ပာဉ်နှင့်စက်ကိရိယာနှင့်အိတ်ပစ္စည်းများ၊
 - (ဍ) ကိရိယာတန်ဆာပလာစတစ်မျိုးမျိုး၊
 - (ဎ) ဆေးနှင့်ဆေးပစ္စည်းများ၊
 - (ဏ) ဘေးသေပက်ကုန်နှင့် အတွေ့အွယ်ကုန်ပစ္စည်းများ၊
 - (တ) အထည်အလိပ်နှင့် အဝတ်အထည်များ၊
 - (ထ) ဝတ္ထု၊ ဓာရေးကိရိယာနှင့် ဓာတ်ပုံပစ္စည်းများ၊
 - (ဒ) ရုံးသုံးပစ္စည်းများနှင့် ပညာရေးအထောက်အကူပြုပစ္စည်းများ။

(၂) ကုမ္ပဏီမှ သင့်လျော်လျှောက်ပတ်သည်ဟု ယူဆပါက ကုမ္ပဏီ၏စီးပွားရေးလုပ်ငန်းတွင် အကျိုးရှိစေရန် အတွက် မည်သည့်ပုဂ္ဂိုလ်၊ စီးပွားရေးအဖွဲ့အစည်း၊ ကုမ္ပဏီ၊ ဘဏ် သို့မဟုတ် ဌာနကြီးအဖွဲ့အစည်းတစ်ခုခုမှ ဆွေးနွေးပူးပေါင်းရန်။

ခြွင်းချက်။ ။ ကုမ္ပဏီသည် အောက်ဖော်ပြပါ ရည်ရွယ်ချက်များကို ပြည်ထောင်စုမြန်မာနိုင်ငံတော်အတွင်း၌ ဖြစ်စေ၊ အခြားမည်သည့် အရပ်ဒေသ၌ဖြစ်စေ၊ အချိန်ကာလအလိုက် တည်မြဲနေသော စာရင်း ဥပဒေများ၊ အမိန့်ကြော်ငြာစာများ၊ အမိန့်များက ခွင့်ပြုထားသည့် လုပ်ငန်းများမှအပ အခြားလုပ်ငန်း များကို လုပ်ကိုင်ဆောင်ရွက်ခြင်းမပြုပါ။ ထို့အပြင် ပြည်ထောင်စု မြန်မာနိုင်ငံတော်အတွင်း၌အချိန် ကာလအားလျော်စွာ တည်မြဲနေသည့် စာရင်းဥပဒေပြဌာန်းချက်များ၊ အမိန့်ကြော်ငြာစာများ၊ အမိန့်များနှင့် လျော်ညီသင့်တော်ခြင်း၊ သို့မဟုတ် ခွင့်ပြုထားခြင်းရှိသောကုန် လုပ်ငန်းများကို ဆောင်ရွက်မည်ဟု ခြွင်းချက်ထားရှိပါသည်။

၅။ အစုရှယ်ယာလက်မှတ်များကို အထွေထွေမန်နေဂျာ သို့မဟုတ် ဒါရိုက်တာအဖွဲ့က သတ်မှတ်သည့် အခြားပုဂ္ဂိုလ်များကလက်မှတ်ရေးထိုး၍ ကုမ္ပဏီ၏တံဆိပ် ရိုက်နှိပ်ထုတ်ပေးရမည်။ အစုရှယ်ယာ လက်မှတ်သည် ပုံပန်းပျက်ခြင်း၊ ပျောက်ဆုံးခြင်း၊ သို့မဟုတ် ပျက်စီးခြင်းဖြစ်ပါက အဖိုးအခဖြင့် ပြန်လည်အသစ်ပြုလုပ်ပေးမှုကို သော်လည်းကောင်း၊ ဒါရိုက်တာများက သင့်လျော်သည်ဟု ယူဆသော အခြားသက်သေခံ အထောက်အထား တစ်စုံတစ်ရာကို ဘင်ပြခေတ္တသော်လည်းကောင်း ထုတ်ပေးနိုင်သည်။ ကုယ်လွန်သွားသော အစုရှယ်ယာရှင်တစ်ဦး၏ တရားဝင် ကိုယ်စားလှယ်ကို ဒါရိုက်တာများက အသိအမှတ် ပြုပေးရမည်ဖြစ်သည်။

၆။ ဒါရိုက်တာများသည် အစုရှင်များက ၎င်းတို့၏ အစုရှယ်ယာများအတွက် မပေးသွင်းရသေးသော ငွေများကိုအခါအားလျော်စွာ တောင်းဆိုနိုင်သည်။ အစုရှင်တိုင်းကလည်း ၎င်းတို့ထံတောင်းဆိုသည့် အကြိမ်တိုင်း အတွက် ဒါရိုက်တာများက သတ်မှတ်သည့် ပုဂ္ဂိုလ်များထံ သတ်မှတ်သည့်အချိန်နှင့် နေရာတွင် ပေးသွင်းစေရန် တာဝန်ရှိစေရမည်။ ဆင့်ခေါ်မှုတစ်ခုအတွက် အရစ်ကျပေးသွင်းစေခြင်း၊ သို့မဟုတ် ပယ်ဖျက်ခြင်း သို့မဟုတ် ရွှေ့ဆိုင်းခြင်းတို့ကို ဒါရိုက်တာများက သတ်မှတ်နိုင်သည်။

ဒါရိုက်တာများ

၇။ သင်းလုံးကျွတ် အစည်းအဝေးက တစ်စုံတစ်ရာ သတ်မှတ်ပြဌာန်းမှု မပြုလုပ်သမျှ ဒါရိုက်တာများ၏ အရေအတွက်သည် (၂) ဦးထက်မနည်း၊ (၃) ဦးထက်မများစေရ။

ပထမဒါရိုက်တာများသည်-

- (၁) _____
- (၂) _____
- (၃) _____
- (၄) _____
- (၅) _____

ဘုံဖြစ်ကြပါသည်။

၈။ ဒါရိုက်တာများသည် ၎င်းတို့အနက်မှ တစ်ဦးကို မန်နေဂျင်းဒါရိုက်တာအဖြစ် အချိန်အကတည်းက သင့်လျော်သော သတ်မှတ်ချက်များ၊ ဥပဒေပုဒ်များဖြင့် နံ့သာရမည်ဖြစ်ပြီး အခါအားလျော်စွာ ဒါရိုက်တာအဖွဲ့က ပေးအပ်သော အာဏာများ အားလုံးကို ၎င်းက အသုံးပြုနိုင်သည်။

၉။ ဒါရိုက်တာတစ်ဦးဖြစ်မြောက်ရန် လိုအပ်သော အရည်အချင်းသည် ကုမ္ပဏီ၏ အစုရှယ်ယာ အနည်းဆုံး (၁၀) ရာခိုင်နှုန်း ပိုင်ဆိုင်ခြင်းဖြစ်၍ ၎င်းသည် မြန်မာနိုင်ငံ ကုမ္ပဏီများအက်ဥပဒေပုဒ်မ ၈၅ ပါ ပြဌာန်းချက်များကို လိုက်နာရန် တာဝန်ရှိသည်။

၁၀။ အစုရှယ်ယာများ လွှဲပြောင်းရန် တင်ပြချက်ကို မည်သည့် အကြောင်းပြချက်မျှ မပေးဘဲ ဒါရိုက်တာအဖွဲ့သည် ၎င်းတို့၏ပြည့်စုံ၍ ချုပ်ချယ်ခြင်းကင်းသော ဆင်ခြင်တုံတရားဆူဖြင့် မှတ်ပုံတင်ရန် ငြင်းဆိုနိုင်သည်။

ဒါရိုက်တာများ၏ ဆောင်ရွက်ချက်များ

၁၁။ ဒါရိုက်တာများသည် ၎င်းတို့သင့်လျော်သည် ထင်မြင်သည့်အတိုင်း လုပ်ငန်းဆောင်ရွက်ရန် တွေ့ဆုံ ဆွေးနွေးခြင်း၊အစည်းအဝေး ရွှေ့ဆိုင်းခြင်း၊ အချိန်မှန်မညှိပေးခြင်း၊ အစည်းအဝေးအထမြောက်ရန် အနည်းဆုံး ဒါရိုက်တာ ဦးရေသတ်မှတ်ခြင်း တို့ကိုဆောင်ရွက်နိုင်သည်။ ယင်းသို့ မသတ်မှတ်ပါက ဒါရိုက်တာတစ်ဦး တက်ရောက်လျှင် အစည်းအဝေး အထမြောက်ရမည်။ အစည်းအဝေးတွင် မည်သည့်ပြဿနာမဆို ပေါ်ပေါက်ပါက မန်နေဂျင်းဒါရိုက်တာ၏ အဆုံးအဖြတ်သည် အတည်ဖြစ်ရမည်။ မည်သည့်ကိစ္စများကို မဆို မဲခွဲဆုံးဖြတ်ရာတွင် မဲအရေ အတွက် တူနေပါက သဘာပတိသည် ခုတိယမဲ သို့မဟုတ် အနိုင်မဲကို ပေးနိုင်သည်။

၁၂။ ဒါရိုက်တာများ၏ အစည်းအဝေးကို မည်သည့်ဒါရိုက်တာကမဆို အချိန်မရွေး ခေါ်နိုင်သည်။

၁၃။ ဒါရိုက်တာ အားလုံးက လက်မှတ်ရေးထိုးထားသော ရေးသားထားသည့် ဆုံးဖြတ်ချက်တစ်ရပ်သည် နည်းလမ်းတကျ ခေါ်ယူကျင်းပသော အစည်းအဝေးက အတည်ပြုသည့် ဆုံးဖြတ်ချက်ကဲ့သို့ပင် ကိစ္စအားလုံး အတွက် အကျိုး သက်ရောက်စေရမည်။

ဒါရိုက်တာများ၏ လုပ်ပိုင်ခွင့်နှင့် တာဝန်များ

၁၄။ မြန်မာနိုင်ငံ ကုမ္ပဏီများ အက်ဥပဒေ နောက်ဆက်တွဲ ဇယားပုံစံ (က)ပါ စည်းမျဉ်းအပိုဒ် ၇၁ တွင် ပေးအပ် ထားသော အထွေထွေ အာဏာများကို မထိခိုက်စေဘဲဒါရိုက်တာများသည် အောက်ဖော်ပြပါ အာဏာများ ရှိရမည်ဟု အတိအလင်း ထုတ်ဖော်ကြေညာသည်။ အာဏာဆိုသည်မှာ-

- (၁) ဒါရိုက်တာများက သင့်လျော်သည်ဟု ယူဆသော တန်ဖိုးနှင့်စည်းကမ်းများ၊ အခြေအနေများ သတ်မှတ်၍ ကုမ္ပဏီက ရယူရန် အာဏာရှိသည့် မည်သည့်ပစ္စည်း၊ အခွင့်အရေးများ၊ အခွင့်အလမ်းများကိုမဆို ဝယ်ယူရန် သို့မဟုတ် အခြားနည်းလမ်းများဖြင့် ရယူပိုင်ဆိုင်ရန်အပြင် ကုမ္ပဏီက ပိုင်ဆိုင်ခွင့်ရှိသော မည်သည့် ပစ္စည်း၊ အခွင့်အရေးများ၊ အခွင့်အလမ်းများကိုမဆို သင့်တော်သော စည်းကမ်းချက်များ သတ်မှတ်၍ ရောင်းချခြင်း၊ အငှားချခြင်း၊ စွန့်လွှတ်ခြင်း၊ သို့မဟုတ် အခြား နည်းလမ်းများဖြင့် ဆောင်ရွက်ခြင်းတို့ကို ပြုလုပ်ရန်။
- (၂) သင့်လျော်သော စည်းကမ်း သတ်မှတ်ချက်များဖြင့် ငွေကြေးများကို ချေးငှားရန် သို့မဟုတ် အဆိုပါချေးငှားသော ငွေကြေးများကို ပြန်လည် ပေးဆပ်ရန်အတွက် အာမခံများ ထားရှိရန်အပြင်၊ အထူးသဖြင့် ဤကုမ္ပဏီ၏ ဒီဘင်ချာများ၊ ဒီဘင်ချာစတော့(ခ်)များ၊ ခေါ်ယူခြင်း မပြုရသေးသော ရင်းနှီးငွေများ အပါအဝင် ပာဇလက်ရှိ နှင့် နောင်ရှိမည့် ပစ္စည်းများအားလုံး သို့မဟုတ် တစ်စိတ်တစ်ဒေသကို အပေါင်ပြု၍ ထုတ်ဝေရန်။
- (၃) ဤကုမ္ပဏီက ရယူထားသော အခွင့်အရေးများ သို့မဟုတ် ဝန်ဆောင်မှုများအတွက် အားလုံး သို့မဟုတ် တစ်စိတ်တစ်ဒေသကို ငွေကြေးအားဖြင့် ပေးချေရန်၊ သို့မဟုတ် အစုရှယ်ယာများ၊ ငွေချေးစာချုပ်များ၊ ဒီဘင်ချာများ၊ သို့မဟုတ် ဤကုမ္ပဏီ၏ အခြားသော အာမခံစာချုပ်များကို ထုတ်ပေးရန်၊ ထို့အပြင် အဆိုပါ အစုရှယ်ယာများ ထုတ်ပေးရာ၌ ငွေအပြည့် ပေးသွင်းပြီးသော အစုရှယ်ယာအနေဖြင့် သော်လည်းကောင်း၊ တစ်စိတ်တစ်ဒေသ ပေးသွင်းပြီးသော အစုရှယ်ယာများ အနေဖြင့် သော်လည်းကောင်း သဘောတူညီသကဲ့သို့ ထုတ်ဝေပေးရန်နှင့် အဆိုပါ ငွေချေးစာချုပ်များ၊ ဒီဘင်ချာများ သို့မဟုတ် ကုမ္ပဏီ၏ အခြားသော အာမခံ စာချုပ်များဖြင့် ထုတ်ဝေပေးရာ၌ ခေါ်ဆိုခြင်း မပြုရသေးသော ရင်းနှီးငွေများ အပါအဝင် ဤကုမ္ပဏီ၏ ပစ္စည်းအားလုံး သို့မဟုတ် တစ်စိတ်တစ်ဒေသကို အပေါင်ပြု၍ဖြစ်စေ၊ ထိုကဲ့သို့မဟုတ်ဘဲဖြစ်စေ ထုတ်ပေးရန်။
- (၄) ဤကုမ္ပဏီနှင့် ပြုလုပ်ထားသော ကန်တရိုက်စာချုပ်များ၊ တာဝန်ယူထားသည့် လုပ်ငန်းများ ပြီးစီးဆောင် ဆောင်ရွက်စေခြင်း အလို့ငှာ ခေါ်ယူခြင်း မပြုရသေးသော ရင်းနှီးငွေများ အပါအဝင် ဤကုမ္ပဏီ၏ ပစ္စည်းရပ်များ အားလုံး သို့မဟုတ် တစ်စိတ်တစ်ဒေသကို ပေါင်နှံ၍ သော်လည်းကောင်း၊ အပေါင်ပြု၍ သော်လည်းကောင်း သို့မဟုတ် အစုရှယ်ယာများအတွက် ငွေများ တောင်းခံခေါ်ယူ၍ သော်လည်းကောင်း ခွင့်ပြုရန် သို့မဟုတ် သင့်လျော်သည့်အတိုင်း ဆောင်ရွက်ရန်။
- (၅) မန်နေဂျာများ၊ အတွင်းရေးမှူးများ၊ အရာရှိများ၊ စာရေးများ၊ ကိုယ်စားလှယ်များနှင့်ဝန်ထမ်းများကို အမြဲတမ်း၊ ယာယီ သို့မဟုတ် အထူးကိစ္စရပ်များအတွက် ခန့်ထားခြင်း၊ ရပ်စဲခြင်း၊ ဆိုင်းငံ့ခြင်းများအတွက် လည်းကောင်း၊ အဆိုပါ ပုဂ္ဂိုလ်တို့၏ တာဝန်များ၊ အာဏာများ၊ လစာငွေများ၊ အခြားငွေကြေးများကို သတ်မှတ်ရာ၌ လည်းကောင်း၊ အာမခံပစ္စည်းများ တောင်းခံရာ၌ လည်းကောင်း သင့်လျော်သလို ဆောင်ရွက်ရန်၊ ထို့အပြင် အဆိုပါ ကိစ္စရပ်များအတွက် ကုမ္ပဏီ၏ မည်သည့် အရာရှိကိုမဆို ကိစ္စရပ် အားလုံးကို ဖြစ်စေ၊ တစ်စိတ် တစ်ဒေသကို ဖြစ်စေ ဒါရိုက်တာများ၏ကိုယ်စား ဆောင်ရွက်နိုင်ရေးအတွက် တာဝန်လွှဲအပ်ရန်။
- (၆) ဤကုမ္ပဏီ၏ ဒါရိုက်တာတစ်ဦးအား ဒါရိုက်တာရာထူးနှင့် တွဲဖက်၍ မန်နေဂျင်း ဒါရိုက်တာ၊ အထွေထွေ မန်နေဂျာ၊ အတွင်းရေးမှူး သို့မဟုတ် ဌာနခွဲ မန်နေဂျာအဖြစ် ခန့်ထားရန်။
- (၇) မည်သည့် အစုရှင်တစ်ဦးမဆို ၎င်းတို့၏ အစုရှယ်ယာများ အားလုံးကို ဖြစ်စေ၊ အချို့အငယ်ကို ဖြစ်စေ စွန့်လွှတ်ခြင်းအား သဘောတူညီသော စည်းကမ်းများဖြင့် လက်ခံရန်။

- (၈) ဤကုမ္ပဏီက ပိုင်ဆိုင်သော သို့မဟုတ် ပိုင်ဆိုင်ခွင့်ရှိသော သို့မဟုတ် အခြားအကြောင်းများကြောင့်ဖြစ်သော မည်သည့် ပစ္စည်းကိုမဆို ကုမ္ပဏီ၏ကိုယ်စား လက်ခံထိန်းသိမ်းထားရန်အတွက် မည်သည့်ပုဂ္ဂိုလ် သို့မဟုတ် ပုဂ္ဂိုလ်များကိုမဆို ခန့်ထားရန်နှင့် အဆိုပါ ယုံမှတ် အပ်နှံခြင်းများနှင့် ပတ်သက်၍ လိုအပ်သော စာချုပ် သဘောထားချက်များ ရှိသည့် ပြုလုပ်ရန်။
- (၉) ဤကုမ္ပဏီ၏ အရေးအရာများနှင့် စပ်လျဉ်း၍ ဤကုမ္ပဏီက ပြုလုပ်သော သို့မဟုတ် ဤကုမ္ပဏီအပေါ် သို့မဟုတ် ဤကုမ္ပဏီ၏ အရာရှိများအပေါ် ပြုလုပ်သော တရားဥပဒေအရ စွဲဆို ဆောင်ရွက်မှုများကို တရားစွဲဆို၊ အရေးယူ၊ ခုံမင်ကာကွယ်ရန် သို့မဟုတ် ခွင့်လွှတ်ရန်၊ ထို့အပြင် ဤကုမ္ပဏီက ရရှိနိုင်သော ကြွေးမြီများနှင့် ဤကုမ္ပဏီအပေါ် တောင်းခံသော ကြွေးမြီများနှင့် ပတ်သက်၍ ပေးဆပ်ရန် အချိန်ကာလ ရွှေ့ဆိုင်းခွင့်ပြုခြင်း သို့မဟုတ် နှစ်ဦးနှစ်ဖက် သဘောတူ ကျေအေးခြင်းများ ပြုလုပ်ရန်။
- (၁၀) ဤကုမ္ပဏီက ပေးရန်ရှိသော သို့မဟုတ် ရရှိရှိသော ငွေတောင်းခံခြင်းများကို ဖြန့်ဖြေရေး စုံသမာဓိသို့ ဖြေရှင်းရန်အတွက် အပ်နှံရန်အပြင် ဖြန့်ဖြေရေး စုံသမာဓိ၏ ဆုံးဖြတ်ချက်အတိုင်း လိုက်နာဆောင်ရွက်ရန်။
- (၁၁) ဤကုမ္ပဏီက ရရှိရှိသော တောင်းဆိုချက်၊ တောင်းခံချက်များနှင့် ကုမ္ပဏီသို့ ပေးရန်ရှိသော ငွေကြေးများအတွက် ပြေစာများ ပြုလုပ် ထုတ်ပေးခြင်း၊ လျှော်ပစ်ခြင်းနှင့် အခြားသောနည်းဖြင့် စွန့်လွှတ်ခြင်းများကို ပြုလုပ်ရန်။
- (၁၂) လူမွဲစာရင်းခံရခြင်း၊ ကြွေးမြီ မဆပ်နိုင်ခြင်း ကိစ္စများနှင့် ပတ်သက်၍ ကုမ္ပဏီ၏ကိုယ်စား ဆောင်ရွက်ရန်။
- (၁၃) ငွေလွှဲစာတမ်းများ၊ ချက်လက်မှတ်များ၊ ဝန်ခံကတိစာချုပ်များ၊ ထပ်ဆင့် လက်မှတ်ရေးထိုးခြင်းများ၊ လျှော်ပစ် ခြင်းများ၊ ကန်ထရိုက် စာချုပ်များနှင့် ဗာရွက်စာတမ်းများကို ကုမ္ပဏီ၏ကိုယ်စား မည်သူက လက်မှတ်ရေးထိုးခွင့် ရှိသည်ကို စိစစ်သတ်မှတ်ရန်။
- (၁၄) ဒါရိုက်တာများက သင့်လျော်သည်ဟု ယူဆပါက သင့်လျော် လျှောက်ပတ်သောနည်းလမ်းများဖြင့် လတ်တလော အသုံးပြုရန် မလိုသေးသော ကုမ္ပဏီပိုင် ငွေများကို အာခံပစ္စည်း ပါသည်ဖြစ်စေ၊ မပါသည်ဖြစ်စေ ရင်းနှီးမြှုပ်နှံ ထားရန်နှင့် စီမံခန့်ခွဲထားရန်။ ထို့ပြင် အချိန်ကာလသတ်မှတ်သော မြှုပ်နှံထားသောငွေကို ပြန်လည်ရယူရန်နှင့် ပြန်ဆင်ပြောင်းလွှဲရန်။
- (၁၅) ဤကုမ္ပဏီ၏ အကျိုးအတွက် ငွေကြေး ဗိုက်ထုတ် ကုန်ကျခံထားသော ဒါရိုက်တာ သို့မဟုတ် အခြား ပုဂ္ဂိုလ်များက ကုမ္ပဏီ၏ (လက်ရှိနှင့် ရောင်းတွင်ရှိမည့်) ပစ္စည်းများကို ဤကုမ္ပဏီ၏ အမည်ဖြင့်ဖြန့်ဖြူး၍ ဤကုမ္ပဏီ၏ ကိုယ်စားဖြစ်စေ ပေါင်နှံခြင်းကို သင့်လျော်သည်ဟု ယူဆပါက ဆောင်ရွက်ခွင့်ပြုရန်။ အဆိုပါ ပေါင်နှံခြင်းဆိုရာ၌ ရောင်းချနိုင်သည့် အာဏာနှင့် အခြားသော သဘောတူညီထားသည့် တရားဝင် သဘောတူညီချက်များနှင့် ဥပဒေပြဋ္ဌာန်းချက်များပါ ပါဝင်သည်။
- (၁၆) ဤကုမ္ပဏီက ခန့်အပ်ထားသော မည်သည့်အရာရှိ သို့မဟုတ် ပုဂ္ဂိုလ်ကိုမဆို အတိအကျ ဆောင်ရွက်ခဲ့သည့်လုပ်ငန်း သို့မဟုတ် ဆောင်ရွက်မှုတစ်ခုအတွက် ရရှိသော အမြတ်ငွေမှ ကော်မရှင်ပေးခြင်း သို့မဟုတ် ကုမ္ပဏီ၏ အသွေအွေ အမြတ်အစွန်းမှ ရွှေ့ပေးခြင်းများ ပြုလုပ်ရန်နှင့် အဆိုပါ ကော်မရှင်များ၊ အမြတ်များရွှေ့ပေးခြင်း ဝသည့်တို့ကို ဤကုမ္ပဏီ၏ လုပ်ငန်းကုန်ကျစရိတ် တစ်စိတ်တစ်ဒေသအဖြစ် သတ်မှတ်ရန်။
- (၁၇) ဤကုမ္ပဏီ၏ လုပ်ငန်းများ၊ အရာရှိများ၊ ဝန်ထမ်းများနှင့် အစုရှင်များအတွက် ထုတ်ပြန်ထားသော ဇည်းမျဉ်း များ၊ စည်းကမ်းချက်များ၊ စည်းကမ်းဥပဒေများကို အခါအားလျော်စွာ သတ်မှတ်ခြင်း၊ ပြင်ဆင်ခြင်း၊ ဖြည့်စွက်ခြင်းများ ဆောင်ရွက်ရန်။
- (၁၈) ဤကုမ္ပဏီ၏ လုပ်ငန်းအတွက် ဤကုမ္ပဏီ၏အမည်ဖြင့်ဖြစ်စေ၊ ဤကုမ္ပဏီ၏ ကိုယ်စားဖြစ်စေ လိုအပ်သည်ဟု ယူဆလျှင် ညှိနှိုင်းဆွေးနွေးခြင်းနှင့် ကန်ထရိုက်စာချုပ် ချုပ်ဆိုခြင်းများကို ပြုလုပ်ရန်၊ ဖျက်သိမ်းရန်နှင့် ပြင်ဆင်ရန် အပြင် အဆိုပါ ဆောင်ရွက်ချက် စာချုပ်များနှင့် ကိစ္စရပ်များကို လည်းကောင်း၊ ၎င်းတို့နှင့် စပ်လျဉ်းသော ကိစ္စရပ်များကို လည်းကောင်း လုပ်ကိုင်ဆောင်ရွက်ရန်။
- (၁၉) ဒါရိုက်တာများက သင့်လျော်လျှောက်ပတ်သည်ဟု ယူဆပါက ကုမ္ပဏီ၏ စီးပွားရေးလုပ်ငန်းတွင် အကျိုး ရှိစေရန်အတွက် မည်သည့် ပြည်တွင်းပြည်ပ ပုဂ္ဂိုလ်၊ စီးပွားရေး အဖွဲ့အစည်း၊ ကုမ္ပဏီ သို့မဟုတ် ဘဏ် သို့မဟုတ် ငွေကြေးအဖွဲ့အစည်းသံမှ မဆို ငွေချေးယူရန်။

အကြောင်းတရားများ

ရှုံ့ဝန်ထမ်းများ

မင်းသားမင်းသမီး

(၃) ဤကမ္မဇာတိ၏ ၇၇၆ပိုဒ်ခွင့်နှင့် ဆေးရန်တမာဝန်များ။

စာရင်းဝင်

၂၀၁၂ ဇာတင်းစစ်များကို နေ့အစဉ်အတုအစည်း၊ ဘုန်းဇာတင်းစစ်များ၏ တာဝန်ခံရလျှင် ပြိုမကျိုး၊ ပျက်စီးမှုများ မရှိကြောင်း သို့မဟုတ် အခါအားလျော်စွာ ပြင်ဆင်သတ်မှတ်သည့် စည်းမျဉ်း စည်းကမ်းများနှင့် ကိုင်စေရမည့်အတိုင်း ဖြစ်ရမည်။

နို့တစ်စာ

၂၁။ ဤကုမ္ပဏီသည် မည်သည့်အရရှင်ထံသို့မဆို နို့တစ်စာကို လက်ရောက်ပေးအပ်ခြင်း သို့မဟုတ် နို့တစ်စာသော စာကို စာတိုက်ခံ ကြိုတင်ပေးထား၍ ၎င်းအရရှင်ထံ မှတ်ပုံတင်လိပ်စာအတိုင်း စာတိုက်မှတစ်ဆင့် လိပ်မူ ပေးပို့ခြင်းအားဖြင့် ပေးပို့နိုင်သည်။

တံဆိပ်

၂၂။ ဒါရိုက်တာများသည် တံဆိပ်ကို လုံခြုံစွာထိန်းသိမ်းထားရန်အတွက် စီမံအောင်ရွက်ရမည်။ ထိုတံဆိပ်ကို ဒါရိုက်တာ များကကြိုတင်ပေးအပ်ထားသည့် ခွင့်ပြုချက်ဖြင့်မှတစ်ပါး၊ ထို့အပြင် အနည်းဆုံး ဒါရိုက်တာတစ်ဦး ရှေ့မှောက်တွင်မှ တစ်ပါး မည်သည့်အခါမျှ မသုံးရ။ တံဆိပ်ရိုက်နှိပ်ထားသည့် စာရွက်စာတမ်းတိုင်းတွင် ကိုဒါရိုက်တာက လက်မှတ်ရေးထိုးရမည်။

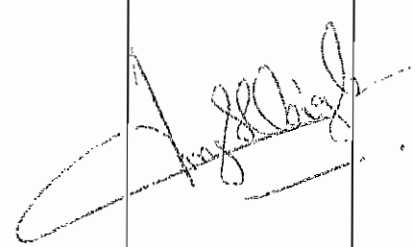
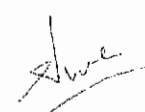
လျော်ကြေး

၂၃။ မြန်မာနိုင်ငံကုမ္ပဏီများ အက်ဥပဒေ ပုဒ်မ ၈၆ (ဂ) တွင် ဖော်ပြပါရှိသည့် ပြဋ္ဌာန်းချက်များ၊ လက်ရှိတရားဝင် တည်ဆဲဥပဒေပြဋ္ဌာန်းချက်များနှင့် မဆန့်ကျင်စေဘဲ ကုမ္ပဏီ၏ ဒါရိုက်တာ၊ စာရင်းစစ်၊ အတွင်းရေးမှူး၊ သို့မဟုတ် အခြားအရာရှိ တစ်ဦးဦးမှာ မိမိ၏ တာဝန် ဝတ္တရားများကို ဆောင်ရွက်ရာ၌ဖြစ်စေ၊ ထိုတာဝန် ဝတ္တရားများနှင့် စပ်လျဉ်း၍ဖြစ်စေ ကျခံခဲ့ရသည့်စရိတ်များ၊ တောင်းခံငွေများ၊ ဆုံးရှုံးငွေများ၊ ကုန်ကျငွေများနှင့် ကြွေးမြီတာဝန်များ အတွက် ကုမ္ပဏီတံမှ လျော်ကြေး ရထိုက်ခွင့်ရှိစေရမည်။

ဖျက်သိမ်းခြင်း

၂၄။ ကုမ္ပဏီ၏ အတွေ့ရကုမ္ပဏီအစည်းအဝေး ဆုံးဖြတ်ချက်ဖြင့် ကုမ္ပဏီအား ဖျက်သိမ်းနိုင်သည်။ ယင်းသို့ ဖျက်သိမ်းရာ တွင် မြန်မာနိုင်ငံကုမ္ပဏီများ အက်ဥပဒေများနှင့် ယင်းဥပဒေများအား အခါအားလျော်စွာ ပြင်ဆင်ပြောင်းလဲထားသည့် တရားဥပဒေများတွင် ပါဝင်သည့် စည်းမျဉ်းများအတိုင်း လိုက်နာပြုလုပ်ရမည်။

အောက်တွင် အမည်၊ နိုင်ငံသား၊ နေရပ်နှင့် အကြောင်းအရာ စုံလင်စွာပါသော ဇယားတွင် လက်မှတ်ရေးထိုးသူ ကျွန်ုပ်တို့ ကိုယ်စီကိုယ်တိုင် ဤသင်းဖွဲ့စည်းမျဉ်းအရ ကုမ္ပဏီတစ်ခုဖွဲ့စည်းရန် လိုလားသည့်အလျောက် ကျွန်ုပ်တို့၏ အမည်အသီးသီးနှင့် ယှဉ်တွဲ၍ ပြထားသော အစုရှယ်ယာများကို ကုမ္ပဏီ၏ မတည်ရင်းနှီးငွေတွင် ထည့်ဝင်ရယူကြရန် သဘောတူကြပါသည်။

စဉ်	အစုထည့်ဝင်သူများ၏ အမည်၊ နေရပ်လိပ်စာနှင့် အလုပ်အကိုင်	နိုင်ငံသားနှင့် အမျိုးသား မှတ်ပုံတင်အမှတ်	ဝယ်ယူသော အစုရှယ်ယာ ဦးရေ	ထိုးမြဲလက်မှတ်
၁။	<p>အောင်ကျော်စိုး</p> <p>နေရပ်လိပ်စာ - ၁၀၀ - ၁၀၀ - ၁၀၀</p> <p>အလုပ်အကိုင် - အောင်ကျော်စိုး</p> <p>အမည်အသီးသီးနှင့် ယှဉ်တွဲ၍ ပြထားသော အစုရှယ်ယာများကို ကုမ္ပဏီ၏ မတည်ရင်းနှီးငွေတွင် ထည့်ဝင်ရယူကြရန် သဘောတူကြပါသည်။</p>	<p>နိုင်ငံသား</p> <p>အမျိုးသား</p> <p>မှတ်ပုံတင်အမှတ်</p>		
၂။	<p>အောင်ကျော်စိုး</p> <p>နေရပ်လိပ်စာ - ၁၀၀ - ၁၀၀ - ၁၀၀</p> <p>အလုပ်အကိုင် - အောင်ကျော်စိုး</p> <p>အမည်အသီးသီးနှင့် ယှဉ်တွဲ၍ ပြထားသော အစုရှယ်ယာများကို ကုမ္ပဏီ၏ မတည်ရင်းနှီးငွေတွင် ထည့်ဝင်ရယူကြရန် သဘောတူကြပါသည်။</p>	<p>နိုင်ငံသား</p> <p>အမျိုးသား</p> <p>မှတ်ပုံတင်အမှတ်</p>		
၃။				

ရန်ကုန်။

နေ့စွဲ။

၊ ခြောက်လဆန်း။

လ၊ ၂၀၁၇ ခုနှစ်။

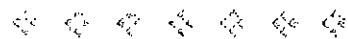
အထက်ပါ လက်မှတ်ရှင်များသည် ကျွန်ုပ်တို့၏ ရှေ့အောင်ကျော်စိုး လက်မှတ်ရေးထိုးကြပါသည်။

THE MYANMAR COMPANIES ACT

PRIVATE COMPANY LIMITED BY SHARES

Memorandum Of Association
OF

MYINTAR CHEMICAL & MATERIALS COMPANY LIMITED



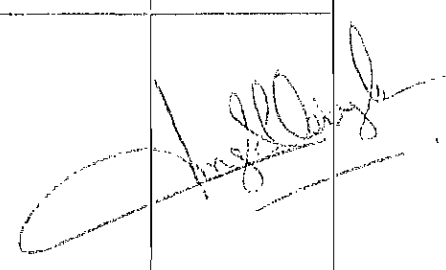
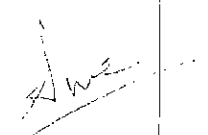
- I. The name of the Company is MYINTAR CHEMICAL & MATERIALS COMPANY LIMITED.
- II. The registered office of the Company will be situated in the Union of Myanmar.
- III. The objects for which the Company is established are as on the next page.
- IV. The liability of the members is limited.
- V. The authorized capital of the Company is Ks. 1000,000,000/- (Kyats One thousand million) Only) divided into (100000) shares of Ks. 10,000 /- (Kyats Ten thousand) Only) each, with power in General Meeting either to increase, reduce or alter such capital from time to time in accordance with the regulations of the Company and the legislative provisions for the time being in force in this behalf.

(2)

- (1) To carry on the trading business of importers, exporters, wholesalers and retailers of the following commodities and products permitted by the Government, solely on its own or in joint-venture with any foreign or local partners.
 - (a) Agricultural and farm produces.
 - (b) Forest products and value-added wood-based products.
 - (c) Animal by-products and Animal feed.
 - (d) Marine products.
 - (e) Fertilizer and insecticides.
 - (f) Chemicals and dyes.
 - (g) Factory utensils and raw material
 - (h) Household goods.
 - (i) Personal goods.
 - (j) Construction materials and paints.
 - (k) Electrical and electronic products.
 - (l) Vehicles, Machinery and spares.
 - (m) Tools and implement.
 - (n) Medicines and medical equipment.
 - (o) Foodstuff and general merchandise.
 - (p) Textile and garment.
 - (q) Paper, stationery and photographic stores.
 - (r) Office equipment and educational supplies.
- (2) To borrow money for the benefit of the Company's business from any person, firm, company, bank or financial organization in the manners that the Company shall think fit.

PROVISO: - Provided that the Company shall not exercise any of the above objects whether in the Union of Myanmar or elsewhere, save in so far as it may be entitled so as to do in accordance with the Laws, Orders and Notifications in force from time to time and then only subject to such permission and or approval as may be prescribed by the Laws, Orders and Notifications of the Union of Myanmar for the time being in force.

We, the several persons, whose names, nationalities, addresses and descriptions are subscribed below, are desirous of being formed into a Company in pursuance of this Memorandum of Association, and we respectively agree to take the number of shares in the capital of the Company set opposite our respective names.

Sr No:	Name, Address and Occupation of Subscribers	Nationality & N. R. C. No.	Number of shares taken	Signatures
1.	U AUNG HLEING OO No. 1120-1124, Thn Hingalar Street, 16/A Ward, Thingungyun Township, Yangon. (Merchant)	Myanmar 12/LeNaNe 1120-1124		
2.	DAW KHIN NWE LEE TUN No. 1120-1124, Thn Hingalar Street, 16/A Ward, Thingungyun Township, Yangon. (Merchant)	Myanmar 12/LeNaNe 1120-1124		
3.				

Yangon. Dated the 28th day of Dec, 1961.

It is hereby certified that the persons mentioned above put their signatures in my presence.

THE MYANMAR COMPANIES ACT
PRIVATE COMPANY LIMITED BY SHARES
Articles Of Association
OF

MYINT CHEMICAL & ELECTRIC COMPANY LIMITED



1. The regulations contained in Table 'A' in the First Schedule to the Myanmar Companies Act shall apply to the Company save in so far as such regulations which are inconsistent with the following Articles. The compulsory regulations stipulated in Section 17 (2) of the Myanmar Companies Act shall always be deemed to apply to the Company.

PRIVATE COMPANY

2. The Company is to be a Private Company and accordingly following provisions shall have effect:-
 - (a) *The number of members of the Company, exclusive of persons who are in the employment of the Company, shall be limited to fifty.*
 - (b) *Any invitation to the public to subscribe for any share or debenture or debenture stock of the Company is hereby prohibited.*

CAPITAL AND SHARES

3. The Authorised Capital of the Company is Ks. 1000,000,000/- (Kyats One thousand million Only) divided into(100000) shares of K. 10,000 /- (Kyats Ten thousand Only) each, with power in General Meeting either to increase, reduce or alter such capital from time to time in accordance with the regulations of the Company and the legislative provisions for the time being in force in this behalf.
4. Subject to the provisions of the Myanmar Companies Act the shares shall be under the control of the Directors who may allot or otherwise dispose of the same to such persons and on such terms and conditions as they may determine.

5. The certificate of title to share shall be issued under the Seal of the Company and signed by the General Manager or some other persons nominated by the Board of Directors. If the share certificate is defaced, lost or destroyed, it may be renewed on payment of such fee, if any, and on such terms, if any, as to evidence and indemnity as the Directors may think fit. The legal representative of a deceased member shall be recognised by the Directors.

6. The Directors may, from time to time make call upon the members in respect of any money unpaid on their shares, and each member shall be liable to pay the amount of every call so made upon him to the persons, and at the times and places appointed by the Directors. A call may be made payable by instalments or may be revoked or postponed as the Directors may determine.

DIRECTORS

7. Unless otherwise determined by a General Meeting the number of Directors shall not be less than (2) and not more than (9).

The First Director shall be:-

(1) U AUNG HLAING OO

(2) MAW KWIN AWE MAW TUN

(3)

(4)

(5)

8. The Directors may, from time to time appoint one of their body to the office of the Managing Director for such term and at such remuneration as they think fit and he shall have all the powers delegated to him by the Board of Directors from time to time.

9. The qualification of a Director shall be the holding or at least (50) shares in the Company in his or her own name and it shall be his duty to comply with the provision of Section (85) of the Myanmar Companies Act.

10. The Board of Directors may in their absolute and uncontrolled discretion refuse to register any proposed transfer of shares without assigning any reason.

PROCEEDINGS OF DIRECTORS

11. The Directors may meet together for the despatch of business, adjourn and otherwise regulate their meeting as they think fit and determine the quorum necessary for the transaction of business. Unless otherwise determined, two shall form a quorum. If any question arising at any meeting the Managing Director's decision shall be final. When any matter is put to a vote and if there shall be an equality of votes the Chairman shall have a second or casting vote.

12. Any Director may at any time summon a meeting of Directors.

13. A resolution in writing signed by all the Directors shall be as effective for all purposes as a resolution passed out at meeting to the Directors, duly called, held and constituted.

POWERS AND DUTIES OF DIRECTORS

14. Without prejudice to the general power conferred by Regulation 71 of the Table "A" of the Myanmar Companies Act, it is hereby expressly declared that the Directors shall have the following powers, that is to say power:—
- (1) To purchase or otherwise acquire for the Company any property, rights or privileges which the Company is authorized to acquire at such price, and generally on such terms and conditions as they think fit; also to sell, lease, abandon or otherwise deal with any property, rights or privileges to which the Company may be entitled, on such terms and conditions as they may think fit.
 - (2) To raise, borrow or secure the payment of such sum or sums in such manner and upon such terms and conditions in all respects as they think fit and in particular by the issue of debentures or debenture stocks of the Company charged upon all or any part of the property of the Company (both present and future) including its uncalled capital for the time being.
 - (3) At their discretion, to pay for any rights acquired or services rendered to the Company, either wholly or partially in cash or shares, bonds, debentures or other securities of the Company and any such shares may be issued either as fully paid up or with such amount credited as paid up thereon as may be agreed upon; and any such bonds, debentures or other securities may be either specifically charged upon all or any part of the property of the Company and its uncalled capital or not so charged.
 - (4) To secure the fulfilment of any contracts or engagement entered into by the Company by mortgage or charge upon all or any of the property of the Company and its uncalled capital for the time being or by granting calls on shares or in such manner as they may think fit.
 - (5) To appoint at their discretion, remove or suspend such Managers, Secretaries, Officers, Clerks, Agents and Servants for permanent, temporary or special services as they may from time to time think fit and to determine their duties and powers and fix their salaries or emoluments and to require security in such instances in such amount as they think fit and to depute any officers of the Company to do all or any of these things on their behalf.
 - (6) To appoint a Director as Managing Director, General Manager, Secretary or Department Manager in conjunction with his Directorship of the Company.
 - (7) To accept from any member on such terms and conditions as shall be agreed on the surrender of his shares or any part thereof.

- (8) To appoint any person or persons to accept and hold in trust for the Company any property belonging to the Company or in which it is interested or for any other purposes and to execute and do all such deeds and things as may be requisite in relation to any such trust.
- (9) To institute, conduct, defend or abandon any legal proceedings by or against the Company or its officers or otherwise concerning the affairs of the Company and also to compound and allow time for payment or satisfaction of any debts due to or of any claims and demands by or against the Company.
- (10) To refer claims and demands by or against the Company to arbitration and to observe and perform the awards.
- (11) To make and give receipts, releases and other discharges for money payable to the Company and for the claims and demands of the Company.
- (12) To act on behalf of the Company in all matters relating to bankruptcy and insolvency.
- (13) To determine who shall be entitled to sign bills of exchange, cheques, promissory notes, receipts, endorsements, releases, contracts and documents for or on behalf of the Company.
- (14) To invest, place on deposit and otherwise deal with any of the moneys of the Company not immediately required for the purpose thereof, upon securities or without securities and in such manners as the Directors may think fit, and from time to time vary or realize such investments.
- (15) To execute in the name and on behalf of the Company in favour of any Director or other person who may incur or be about to incur any personal liability for the benefit of the Company, such mortgages of the Company's property (present and future) as they think fit and any such mortgage may contain a power of sale and such other powers, covenants and provisions as shall be agreed on.
- (16) To give any officer or other person employed by the Company a commission on the profits of any particular business or transaction or a share in the general profit of the Company and such commission or share of profit shall be treated as part of the working expenses of the Company.
- (17) From time to time, to make, vary and repeal bye-laws, for the regulation of the business of the Company, the officers and servants or the members of the Company or any section thereof.
- (18) To enter into all such negotiations and contracts and rescind and vary all such contracts and execute and do all such acts, deeds and things in the name and on behalf of the Company as they may consider expedient for or in relation to any of the matter aforesaid or otherwise for the purposes of the Company.
- (19) To borrow money for the benefit of the Company's business from any person, firm or company or bank or financial organisation of local and abroad in the manner that the Directors shall think fit.

GENERAL MEETINGS

15. A general meeting shall be held within eighteen months from the date of its incorporation and thereafter at least once in every calendar year at such time (not being more than fifteen months after the holding of the last preceding general meeting) and places as may be fixed by the Board of Directors. No business shall be transacted at any general meeting unless a quorum of members is presented at the time when the meeting proceeds to business, save as herein otherwise provided. Member holding not less than 50 percent of the issued shares capital (not less than two members) personally present, shall form a quorum for all purposes. And if and when in the case of there are only two number of members in the Company, those two members shall form a quorum.

DIVIDENDS

16. The Company in general meeting may declare a dividend to be paid to the members, but no dividend shall exceed the amount recommended by the Directors. No dividends shall be paid otherwise than out of the profits of the year or any other undistributed profits.

OFFICE STAFF

17. The Company shall maintain an office establishment and appoint a qualified person as General Manager and other qualified persons as office staffs. The remunerations and allowances such as salaries, travelling allowances and other expenditures incidental to the business shall be determined by the Board of Directors, and approved by the general meeting. The General Manager shall be responsible for the efficient operation of the office in every respect and shall be held accountable at all times to the Managing Director.

ACCOUNTS

18. The Directors shall cause to be kept proper books of account with respect to:-
(1) *all sums of money received and expended by the Company and the matters in respect of which the receipts and expenditures take place;*
(2) *all sales and purchases of goods by the Company;*
(3) *all assets and liabilities of the Company.*
19. The books of account shall be kept at the registered office of the Company or at such other place as the Directors shall think fit and shall be opened to inspection by the Directors during office hours.

AUDIT

20. Auditors shall be appointed and their duties regulated in accordance with the provisions of the Myanmar Companies Act or any statutory modifications thereof for the time being in force.

NOTICE

21. A notice may be given by the Company to any member either personally or sending it by post in a prepaid letter addressed to his registered address.

THE SEAL

22. The Directors shall provide for the safe custody of the Seal, and the Seal shall never be used except by the authority of the Directors previously given, and in the presence of one Director at least, who shall sign every instrument to which the Seal is affixed.

INDEMNITY

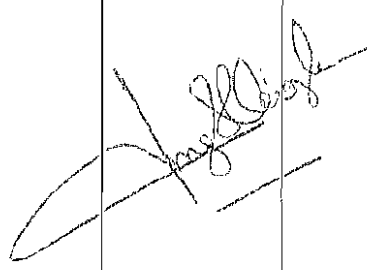
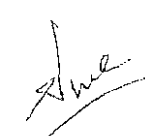
23. Subject to the provisions of Section 86 (C) of the Myanmar Companies Act and the existing laws, every Director, Auditor, Secretary or other officers of the Company shall be entitled to be indemnified by the Company against all costs, charges, losses, expenses and liabilities incurred by him in the execution and discharge of the duties or in relation thereto.

WINDING-UP

24. Subject to the provisions contained in the Myanmar Companies Act and the statutory modification thereupon, the Company may be wound up voluntarily by the resolution of General Meeting.

❖ ❖ ❖ ❖

We, the several persons, whose names, nationalities, addresses and descriptions are subscribed below, are desirous of being formed into a Company in pursuance of this Articles of Association, and we respectively agree to take the number of shares in the capital of the Company set opposite our respective names.

Sr. No:	Name, Address and Occupation of Subscribers	Nationality & N. R. C. No.	Number of shares taken	Signatures
1.	U AUNG BLAING OO No. 1120-1121, The Fingalar Street, 16/4 Ward, Thingangyun Township, Yangon. (Merchant)	Myanmar 12/LahaTa (Naing) 025297		
2.	DAW HMIR KWE MAE TUN No. 1120-1121, The Fingalar Street, 16/4 Ward, Thingangyun Township, Yangon. (Merchant)	Myanmar 12/LahaTa (Naing) 002668		
3.				

Yangon. Dated the 24th day of May, 2001

It is hereby certified that the persons mentioned above put their signatures in my presence.

MYANMAR CHEMICAL AND MACHINERY COMPANY LIMITED

FINAL ACCOUNT

AND

AUDIT REPORT

(2015 - 2016)





Myanmar Chemical & Machinery Co., Ltd.

No. 1120/1121, Thumingalar Road, 18/4 Quarter, Thingangyun Tsp, Yangon, Myanmar
Tel : 95-1-582020, 582021 Fax: 95-1-577148, 582131 E-mail: mcm@myanmar.com.mm

STATEMENT OF THE DIRECTORS

We, and being two Directors of
Myanmar Chemical And Machinery Co., Ltd do here by state that, in the opinion of
the Directors, the accompanying Accounts made up to March 31st, 2016 Schedules and Notes to the
Accounts are drawn up so as to give a true and fair view of the state of affair of the Company, and of the
result of the Company for the year ended on the date of this statement. Entries of the responsible persons
of the Company as to receipt and payment, and documents concerned assigned to **Ngwe Inzaly Audit
Firm** for auditing of Final yearly account for the financial year **2015 - 2016** We believe
that the Company will be able to pay its debts as and when they fall due, and all accounts receivable are
good and recoverable.

We admitted that the auditing done on the submission of our data presented is right. If there is the
occurrence of Income-bearing business besides the said account, It is the obligations of all the share holders
of the Company.

We support that the facts above mentioned are true and correct according to section 133 (1) (2)
of the Myanmar Company Act.

On behalf of the Board



U Aung Hsing On
Managing Director

Myanmar Chemical & Machinery Co., Ltd.

Daw Khin Hwey Mar Tint
Director

Myanmar Chemical & Machinery Co., Ltd.

25 JAN 2017

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED
STATEMENT OF FINANCIAL POSITION AS AT 31.3.2016

2014-2015			2015-2016
Kyats		Note	Kyats
	Assets		
	Non-Current Assets		
580,646,064.90	Tangible Assets	1	608,684,782.00
	Intangible Assets		
14,064,362.00	Deern Profit Adjustment	2	14,064,362.00
	Current Assets		
74,663,624.00	Rubber Planting	3	117,463,855.00
21,496,400.00	Inventory		-
1,028,000.00	Preliminary Expenses	4	1,028,000.00
2,627,746,880.00	Deposit	5	15,279,813,744.28
82,129,930.00	Receivable	6	37,960,980.00
521,942,476.00	Advance Payment	7	766,589,657.00
346,577,072.50	Cash at Bank	8	145,600,002.08
5,767,132.00	Cash in Hand - Rubber Project	9	11,148,779.97
7,164,144,587.10	Cash in Hand	10	44,706,594.10
11,440,206,528.50	Total Assets		17,027,060,756.43
	Equity & Liabilities		
500,000,000.00	Authorized Capital	11	500,000,000.00
	(50000 shares @ 10000 Ks)		
5,100,000.00	Issued & Paid up Capital	12	5,100,000.00
	(510 Shares @ 10,000 Ks)		
1,195,450,787.52	Retained Earning Account	13	1,749,626,396.42
	Current Liabilities		
17,019,585.00	Provision for Commercial tax	14	202,708,252.00
10,222,636,155.98	Payable	15	15,068,626,108.01
11,440,206,528.50	Total Equity & Liabilities		17,027,060,756.43

U Aung Hlaing Oo
 Managing Director

Managing Director & Treasurer

U Aye Win
 Director
 Myanmar Chemical & Machinery Co., Ltd.

Managing Director & Treasurer

U Aye Win

Managing Director & Treasurer



NGWE INZALY

Audit Firm

Room. 801, Tower B,
50th Street Condominium (AMPS), 50th Street,
Between Maha Bandula Road & Merchant Road,
Botahtaung Township, Yangon, Myanmar.

Tel : 095000752, 095119742, 0973049312
095342805, 397424, 397575
Gmail : ngweinzal@gmail.com
Website : www.ngweinzalaudit.com

AUDITOR'S REPORT

MANAGING DIRECTOR

MYANMAR CHEMICAL AND MACHINERY CO., LTD

We have audited the accompanying balance sheet of the **Myanmar Chemical And Machinery Co., Ltd** as of March 31, 2016 and income statement, statement of change in equity and cash flow statement for the year then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with Myanmar Standards on Auditing. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In accordance with the Section 145(1)(2) of the Myanmar Companies Act, we report that:

In our opinion,

(1) Subject to our notes to the Financial Statements, the Company's accounts and statements are properly drawn up in conformity with the provisions of the Myanmar Companies Act and Myanmar Accounting Standards so as to exhibit a true and fair view of the financial position of the Company as of March 31, 2016 and of its financial performance and its cash flows for the year then ended, according to informations and explanations given to us.

(2) Our audit has been conducted based on the books and records provided by the Company, have been maintained according to Section 130 of the Myanmar Companies Act.

AUDITOR


Date: 25 JAN 2017
Yangon.




DAW AYE THIDA
B.Com (Q), C.P.A., PA-306
Accountant and Auditor
Rm(801), Tower(B), 8th Floor,
50th Street Condo (AMPS),
1st, Mahabandoola Road & Merchant Road

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED
STATEMENT OF COMPREHENSIVE INCOME
FOR THE YEAR ENDED 31 - 3 - 2016

		Kyats
Revenue	<i>Sch-1</i>	3,763,736,043.00
Less: Operating Expenses	<i>Sch-1.1</i>	(3,436,741,328.06)
Gross Profit / (Loss)		<u>326,994,714.94</u>
Add: Exchange Gain	<i>Sch-7</i>	55,041,439.62
Less: Depreciation for the year	<i>Sch-5</i>	(61,227,265.90)
Less: Administrative Expenses	<i>Sch-6</i>	(132,025,231.84)
Net Profit / (Loss)		<u><u>188,783,656.82</u></u>



U Aye Hsing Co
Managing Director
Myanmar Chemical & Machinery Co., Ltd.



Dye
Director
Myanmar Chemical & Machinery Co., Ltd.



DAW AYE THIDA
B.Com (Q), CPA, PA-306
Accountant and Auditor
Residence, Tower 24th Floor
No. 7-11/12 Street (ANPS)
Maha Aungmye Road & Mercima Road

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

		Sch-1
Revenue		Kyats
Construction Income - Myingyan	<i>Sch-2</i>	3,251,779,000.00
Construction Income - Caustic Soda		31,270,000.00
Import Sales	<i>Sch-3.1</i>	491,253,000.00
Service Income for Tender Processing (US\$ 120,000)		146,160,000.00
		<hr/> 3,920,462,000.00
Less: Provision for Commercial tax		(186,688,667.00)
		<hr/> 3,733,773,333.00
Rubber Sales	<i>Sch-4.1</i>	29,962,710.00
		<hr/> <hr/> 3,763,736,043.00

		Sch-1.1
Operating Expenses		Kyats
Costs for Construction	<i>Sch-2.1</i>	2,959,980,739.00
Sub Contract Expenses		25,641,400.00
Import Costs of Goods Sold	<i>Sch-3</i>	146,184,462.01
<u>Expenses for Rubber Sales</u>		
Production Expenses	<i>Sch-4</i>	265,409,017.69
Overhead Expenses	<i>Sch-4.2</i>	39,525,709.36
		<hr/> 304,934,727.05
		<hr/> <hr/> 3,436,741,328.06

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Sch-2

Construction Income

Kyats

Piping Works - (မြင်းခြံသံမဏိစက်ရုံ)

Sch-2.2

3,251,779,000.00

Sch-2.1

Costs for Construction

Kyats

Direct Material Expenses

1,514,151,490.00

Direct Labour Expenses

366,183,651.00

Sub-Con Expenses

500,000,000.00

Crane Charges

343,227,875.00

Inspection fee

183,380,000.00

Indirect Expenses

53,037,723.00

2,959,980,739.00

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Construction Income, Withholding tax and Commercial tax Schedule

Sch-2.2

Sr.	Project Name	Contract Value (Ks)	Withholding	Commercial tax
1	Piping Works - (မြင်းခြံသမ္မတစက်ရုံ)	3,251,779,000.00	65,035,580.00	154,846,619.00
		3,251,779,000.00	65,035,580.00	154,846,619.00

Withholding tax Schedule

Sch-2.3

Sr.	Project Name	Cash Received	Withholding tax	Date
1	Piping Works - (မြင်းခြံသမ္မတစက်ရုံ)	93,360,000.00	1,867,200.00	31.8.2015
2	Piping Works - (မြင်းခြံသမ္မတစက်ရုံ)	1,806,621,000.00	36,132,420.00	29.9.2015
3	Piping Works - (မြင်းခြံသမ္မတစက်ရုံ)	703,308,000.00	14,066,160.00	29.9.2015
4	Piping Works - (မြင်းခြံသမ္မတစက်ရုံ)	323,312,000.00	6,466,240.00	22.2.2016
5	Piping Works - (မြင်းခြံသမ္မတစက်ရုံ)	325,178,000.00	6,503,560.00	18.3.2016
		3,251,779,000.00	65,035,580.00	

Commercial tax Schedule

Sch-2.4

Sr.	Project Name	Project Income	Commercial tax	Date
1	Piping Works - (မြင်းခြံသမ္မတစက်ရုံ)	3,251,779,000.00	154,846,619.00	10.3.2016
		3,251,779,000.00	154,846,619.00	

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Sch-3

Import Costs of Goods Sold

Kyats

Import Purchase	\$	63,492.16	77,333,446.01
<u>Import Direct Expenses</u>			
Import Duty		1,342,956.00	
Security fee		480,000.00	
Custom Clearance		9,428,060.00	
Container & Transport		48,000,000.00	
Crane Charges		9,600,000.00	
			68,851,016.00
			<u>146,184,462.01</u>

Sch-3.1

Import Sales

Kyats

Import Sales	\$	42,580.16	289,695,000.00
Import Sales	\$	8,192.00	129,150,000.00
Import Sales	\$	12,720.00	72,408,000.00
		<u>63,492.16</u>	<u>491,253,000.00</u>

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Sch-4

Manufacturing Account for the year ended 31.3.2016

Rubber Planting Project

Kyats

Direct Labour (Tapping Charges)	20,298,824.00	
Direct Material	15,316,700.00	
Direct Expenses	<u>900,000.00</u>	36,515,524.00
Rubber Estate Salary	168,031,896.46	168,031,896.46
<u>Processing Expenses</u>		
Indirect Expenses	1,810,000.00	
Fixed Expenses	24,341,732.23	
Travelling Charges	10,000.00	
Machine Repair Charges	<u>29,500.00</u>	26,191,232.23
Depreciation for the year		34,670,365.00
Production Costs for (61,258 lbs)		<u><u>265,409,017.69</u></u>

Sch-4.1

Sales Income

Kyats

Rubber Sales	<i>Sch-4.4</i>	<u><u>29,962,710.00</u></u>
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MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Import Purchase, Sales & Advance Tax Schedule

Sch-3.2

Sr.	Date	IDA No	ID Amt(US\$)	Description	Unit	Qty	Amt (US\$)	Import Sales (Ks)	Withholding tax	Commercial tax	AV Value	Import Duty	Commercial Tax	Security fee	1% Tax
1	28-Dec-15	900123	13,492.56	Raw Materials							62,129,223.00	621,292.00	3,137,526.00	220,000.00	1,241,584.00
				Magnesia Carbon RB	Kg	893.28	89.38								
				Magnesia Carbon RB	Kg	1,037.40	103.74								
				Magnesia Carbon RB	Kg	7,022.40	702.24								
				Magnesia Motor	Kg	3,000.00	300.00								
				Crushing Mix	Kg	23,000.00	2,300.00								
				Rolling Mix	Kg	27,000.00	2,700.00								
				Cry Vibration Mix	Kg	15,000.00	1,500.00								
				Turbine Spraying Motor	Kg	180,000.00	18,000.00								
2	14-Dec-15	193098	10,361.00	Raw Materials				275,900,000.00	5,518,000.00	13,795,000.00	16,938,900.00	169,389.00	855,414.00	80,000.00	158,778.00
				Castables B72	Kg	31,000.00	7,650.00								
				Castables F42	Kg	2,000.00	200.00								
				Castables B83	Kg	12,000.00	2,160.00								
				Castables B75V	Kg	1,500.00	225.00								
				Alumina Process Brick	Kg	640.00	128.00								
3	9-Dec-15	901130	4,201.80	Raw Materials							11,008,716.00	110,087.00	555,940.00	40,000.00	220,174.00
				Magnesia Carbon Brick	Kg	278.00	27.80								
				Mortar	Kg	1,440.00	144.00								
				Crushing Mix	Kg	40,000.00	4,000.00								
4	24-Nov-15	186966	4,320.00	Perramil MA 70	Kg	56,000.00	4,320.00				6,739,200.00	67,392.00	340,320.00	40,000.00	134,784.00
			42,580.16	Total		382,111.56	42,580.16	275,900,000.00	5,518,000.00	13,795,000.00	16,816,039.00	168,160.00	4,889,210.00	360,000.00	1,354,336.00

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Import Purchase, Sales & Advance Tax Schedule

Sch-3.2

Sr.	Date	ID No	ID Amt(US\$)	Description	Unit	Qty	Amt (US\$)	Import Sales (Ks)	Withholding tax	Commercial tax	AV Value	Import Duty	Commercial Tax	Security fee	1% Tax
1	16-Dec-15	197344	8,192.00	Raw Material							12,828,672.00	129,461.00	647,906.00	20,000.00	256,573.00
				Biooxide 1117	Kg	250.00	125.00								
				Polymer	Kg	150.00	150.00								
				Biooxide 11	Kg	1,650.00	825.00								
				Biooxide 16	Kg	5,490.00	2,745.00	123,000,000.00	2,460,000.00	6,150,000.00					
				Biooxide 21	Kg	6,120.00	3,060.00								
				Biooxide 25	Kg	100.00	120.00								
				Chemical Chemical	Kg	930.00	877.00								
				Biooxide 1712	Kg	900.00	200.00								
			8,192.00	Total		15,190.00	8,192.00	123,000,000.00	2,460,000.00	6,150,000.00	12,828,672.00	129,461.00	647,906.00	20,000.00	256,573.00

Import Purchase, Sales & Advance Tax Schedule

Sch-3.2

Sr.	Date	ID No	ID Amt(US\$)	Description	Unit	Qty	Amt (US\$)	Import Sales (Ks)	Withholding tax	Commercial tax	AV Value	Import Duty	Commercial Tax	Security fee	1% Tax
1	29-Dec-15	201349	2,400.00	Raw Material											
				Pernapit MA72	Kg	20,000.00	2,400.00				6,285,000.00	62,800.00	317,544.00	20,000.00	125,760.00
2	23-Jul-15	142346	5,920.00	Raw for Industry											
				Growing Mix Ankerjet	Kg	6,000.00	890.00				16,555,760.00	125,537.00	633,965.00	40,000.00	251,075.00
				Ankerjet L081	Kg	54,000.00	4,930.00	72,400,000.00	1,448,160.00	3,448,000.00					
3	29-Apr-15	208021	4,400.00	Raw Material											
				Growing Mix Pernapit	Kg	13,000.00	2,400.00				5,691,840.00	56,918.00	287,438.00	20,000.00	113,837.00
				Peeling Mix Ankerjet	Kg	10,000.00	2,000.00								
			13,720.00	Total		82,000.00	11,720.00	72,400,000.00	1,448,160.00	3,448,000.00	24,533,600.00	245,335.00	1,238,947.00	80,000.00	499,672.00

Source: Myanmar Chemical & Machinery Company Limited, 2016. Data from the company's internal records.

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

	Sch-4.2
<u>Administrative Expenses - Rubber</u>	Kyats
Office Salary	25,438,800.00
Office Accessories	319,800.00
Drinking Expenses	121,990.00
Phone Expenses	122,250.00
Meror Bill & YCDC Tax Charges	317,890.00
Internet Bill	189,000.00
Fuel Expenses	3,004,050.00
General Expenses	811,250.00
Stationery	264,550.00
Postage and Telex Charges	17,000.00
Labour Charges	35,000.00
Bonus Charges	1,190,000.00
Donation Expenses	1,064,700.00
Lawer & Taxes	280,000.00
Entertainment Expenses	1,399,140.00
Hotel Charges	374,500.00
Travelling Expenses	18,000.00
Meal Expenses	1,424,500.00
Condo Maintenance fee	204,700.00
Bank Service Expenses	180,189.36
Rent Expenses	2,400,000.00
Repair & Maintenance	348,400.00
	<hr/>
	39,525,709.36 <hr/>

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Rubber Planting Expenses Deferred

Sch-4.3

Description	13-14	14-15	15-16	Closing Bal
Immature Rubber (2-5 years)	21,200,380.00	17,252,450.00	16,774,780.00	55,227,610.00
Replanting Rubber (1 year)	32,962,980.00	3,247,814.00	26,025,451.00	62,236,245.00
	54,163,360.00	20,500,264.00	42,800,231.00	117,463,855.00

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Rubber Sales Statement for the year 2015-2016

Sch-4.4

Sl	Estate	RSS - 1		RSS - 2		RSS - 3		RSS - 4		RSS - 5		Cup Lump		Grand Total	
		Lb	Amount	Lb	Amount	Lb	Amount	Lb	Amount	Lb	Amount	Lb	Amount	Lb	Amount
1	Mayangone					1,189	622,320			19,969	10,045,900	3,543	746,200	24,703	11,414,920
2	Paungkyoneka					1,174	665,990	350	192,500			246	36,060	1,770	914,550
3	Nyaungchatung									540	295,200			540	195,200
4	Tharaphyutayat	2,367	1,656,900	23,759	13,102,720	1,040	707,200					7,079	1,871,220	34,245	17,318,040
	Total	2,367	1,656,900	23,759	13,102,720	3,403	1,996,010	350	192,500	20,509	10,341,100	10,870	2,673,480	61,258	29,962,710

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Tangible Assets Less Depreciation

Sch.5

Sr.	Description	Qty	Original Costs			Rate	Depreciation			Net Book Value
			Pre. year	For the year	Total		Pre. year	For the year	Total	
1	Office Furniture & Fitting									
	Chair	10	42,000.00		42,000.00	10%	4,200.00	4,200.00	8,400.00	33,600.00
	Chair	4	23,200.00		23,200.00	10%	2,320.00	2,320.00	4,640.00	20,880.00
	Bedsheet (3'25"x6'5"x2')	3	102,000.00		102,000.00	10%	10,200.00	10,200.00	20,400.00	91,600.00
	Office Table (3'x4'x2'5')	1	15,000.00		15,000.00	10%	1,500.00	1,500.00	3,000.00	13,500.00
2	Office Machine & Equipment									
	Projector	1	447,150.00		447,150.00	10%	44,715.00	44,715.00	89,430.00	357,720.00
	Cooker	1	26,000.00		26,000.00	10%	2,600.00	2,600.00	5,200.00	20,800.00
	TP-Link Wireless	2	42,000.00		42,000.00	10%	4,200.00	4,200.00	8,400.00	37,600.00
	Tractor	4	107,200,000.00		107,200,000.00	20%	21,440,000.00	21,440,000.00	42,880,000.00	64,320,000.00
3	Computer Equipment									
	Computer	1	482,000.00		482,000.00	10%	48,200.00	48,200.00	96,400.00	385,600.00
	Computer	1	436,500.00		436,500.00	10%	43,650.00	43,650.00	87,300.00	349,200.00
	Computer	1	477,000.00		477,000.00	10%	47,700.00	47,700.00	95,400.00	381,600.00
	Computer	1	610,800.00		610,800.00	10%	61,080.00	61,080.00	122,160.00	488,640.00
4	Machinery									
	Tractor	2	59,600,000.00		59,600,000.00	20%	11,920,000.00	11,920,000.00	23,840,000.00	35,760,000.00
	Ploughshare	2	4,860,000.00		4,860,000.00	20%	972,000.00	972,000.00	1,944,000.00	2,916,000.00
5	Motor Cycle	1	680,000.00		680,000.00	10%	68,000.00	68,000.00	136,000.00	544,000.00

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Tangible Assets Less Depreciation

Sch-5

Sr	Description	Qty	Original Costs			Rate	Depreciation			Net Book Value
			Pre: year	For the year	Total		Pre: year	For the year	Total	
6	Bud Wood Mowery	1		692,000.00	692,000.00	10%				692,000.00
7	Mining Tipper	1	54,658,889.00		54,658,889.00	10%	5,465,889.80	5,465,889.80	10,931,779.60	43,727,118.40
	Mining Tipper		54,658,889.00		54,658,889.00	10%	5,465,889.80	5,465,889.80	10,931,779.60	43,727,118.40
	Mining Tipper		88,547,778.00		88,547,778.00	10%	8,854,777.80	8,854,777.80	17,709,555.60	30,818,222.40
8	Truck Crane	3	291,162,737.00		291,162,737.00	10%	29,116,273.70	29,116,273.70	58,232,547.40	232,930,189.60
11	Mobile Crane	1		123,244,348.00	123,244,348.00	10%		12,324,434.80	12,324,434.80	110,919,913.20
	Total		664,075,961.00	123,936,348.00	788,002,309.00		83,475,896.10	95,597,630.90	179,073,527.00	608,624,782.00

We hereby certify that the above Tangible assets are the properties of "Myanmar Chemical & Machinery Co., Ltd" and in existence at March 31, 2016. The demiled inventory produced includes all Tangible assets purchased with proper capital expenditure budget and sanction of the board of directors.

Tangible Assets Register is not Maintained

(General Manager/Director)

(Finance Manager/Managing Director)

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Sch-5.1

Tangible Assets for the year imported

Kyats

Mobile Crane

Import Purchase	\$	94,000.00	114,492,000.00
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Import Direct Expenses

Import Duty		1,430,140.00	
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Commercial tax		7,222,208.00	
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Other Tax		100,000.00	
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8,752,348.00

123,244,348.00

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Sch-6

Administrative Expenses	Kyats
Phone Expenses	324,000.00
Entertainment Charges	6,245,712.00
Water Expenses	153,500.00
Travelling Expenses	9,439,458.00
Stationary Expenses	1,682,590.00
Office Expenses	620,060.00
Uniform Expenses	807,800.00
Hotel Charges	2,934,232.00
Meal Charges	670,000.00
Salary Charges	79,200,000.00
Amendment fee (US\$ 3,883.28)	4,718,044.80
Bank Charges (US\$ 3,873.60)	4,729,835.04
Shop Rental Charges	18,000,000.00
Audit fee	2,500,000.00
	<u>132,025,231.84</u>

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

MFTB Bank Statement

Sch-7

Description	Debit		Credit	
	US\$	Equv Kyats	US\$	Equv Kyats
Opening Balance	329,042.45	345,494,572.50		
Payable to MCM Pte Ltd	9,732,386.00	11,854,046,148.00		
Bank Charges			3,727.15	4,539,668.70
Amendment fee			3,883.28	4,729,835.04
Transfer Sales			16,160.04	19,682,930.00
PG Deposit / Refund	81,440.00	99,193,920.00	11,899,549.90	14,493,651,778.20
PG Refund (pre:year)	1,899,298.55	2,313,345,633.90		
Receivable from MCM Pte				
Exchange Gain		55,041,439.62		
Closing Balance			118,846.63	144,517,502.08
	12,042,167.00	14,667,121,714.02	12,042,167.00	14,667,121,714.02

Sch-7.1

Bid Bond Deposit	US\$	Kyats
Bid Bond Deposit (Opening Balance)	2,626,546.88	2,626,546,880.00
Received back - MICB Bank	(1,899,298.55)	(2,313,345,633.90)
Bank Charges	(146.45)	(178,376.10)
Exchange Gain		571,133,016.08
Closing Balance	<u>727,101.88</u>	<u>884,155,886.08</u>
Bid Bond Deposit (for the year)	11,899,549.90	14,493,651,778.20
Received back - MICB Bank	(81,440.00)	(99,193,920.00)
Closing Balance	<u>11,818,109.90</u>	<u>14,394,457,858.20</u>
Total	12,545,211.78	15,278,613,744.28

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Retained Earning Account	Sch-8 Kyats
Net Profit / (Loss) After Assessment (2001-2002)	-
Net Profit / (Loss) After Assessment (2002-2003)	-
Net Profit After Assessment (2003-2004)	911,742.00
Net Profit After Assessment (2004-2005)	778,330.00
Net Profit After Assessment (2005-2006)	775,865.00
Net Profit Before Assessment (2006-2007)	100,270.00
Net Profit After Assessment (2007-2008)	1,113,958.00
Net Profit After Assessment (2008-2009)	1,150,952.00
Net Profit After Assessment (2009-2010)	1,670,923.00
Net Profit After Assessment (2010-2011)	2,716,794.00
Net Profit After Assessment (2011-2012)	2,964,962.00
Exchange Reserve	81,900.00
Net Profit (2012-2013)	10,552,258.00
Net Loss (2013-2014)	(29,608,522.27)
Previous year profit & loss adjustment	(432,800.00)
Net Profit (2014-2015)	1,202,674,155.79
Exchange Gain	365,391,952.08
Net Profit (2015-2016)	188,783,656.82
	<hr/> 1,749,626,396.42 <hr/>

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Sch-9

Cash Summary Statement (Head Office)

Kyats

Opening Balance	7,164,144,587.10	
Add: Import Sales Sales	491,253,000.00	
Construction Income - Myingyan Project	3,251,779,000.00	
Construction Income - Caustice Soda Project	31,270,000.00	
Transfer Sales	19,682,930.00	
Received back from Rubber Planting Project	23,872,550.00	
		10,982,002,067.10
Less: Previous year payable	3,000,000.00	
Withdraw from Rubber Planting Project	270,492,357.00	
Paid for Import Purchase	7,231,364,494.00	
Import Direct Expenses	68,851,016.00	
Import Direct Expenses for Tangible Assets	8,752,348.00	
Construction Costs for Myinchan Project	2,959,980,739.00	
Advance Income tax for Mobile Crane fixed assets	2,860,280.00	
Withholding tax for Construction Income	65,035,580.00	
Advance Commercial tax for Construction Income	154,846,619.00	
Withholding tax for Import Saels (15-16)	9,426,160.00	
Advance Commercial tax for Import Sales (15-16)	23,393,000.00	
Advance Income tax for Import - Custom(15-16)	2,683,565.00	
Advance Commercial tax for Import - Custom(15-16)	6,776,063.00	
Advance Commercial tax for Caustic Soda Project	1,489,100.00	
Withholding tax for Caustic Soda Project	625,400.00	
Construction Costs for Caustic Soda Project	25,641,400.00	
Administrative Expenses	102,077,352.00	(10,937,295,473.00)
Closing Balance		44,706,594.10

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Sch-9.1

Payable to MCM Pacific Pte	US\$	Equv: Kyats
Opening Balance	1,041,508.50	1,041,508,500.00
Received - MFTB Bank	9,732,386.00	11,854,046,148.00
Service Income for Office Management from MCM Pacific	(120,000.00)	(146,160,000.00)
Exchange Loss		205,741,064.00
	<u>10,653,894.50</u>	<u>12,955,135,712.00</u>

Sch-9.2

Cash Summary Statement (Rubber)

Kyats

Opening Balance	5,767,132.00	
Add: From Head Office - TGK	270,492,357.00	
Ruber Sales Income	29,962,710.00	
Received back for Advance Replanting Expenses	1,284,000.00	
Receivable for previous year	<u>22,672,550.00</u>	330,178,749.00
Less: Rubber Planting Expenses - Immature	11,990,950.00	
Rubber Planting Expenses - Replanting	21,041,245.00	
Assets Purchase for the year	692,000.00	
Previous year payable	6,101,811.98	
Repayment to Head Office - TGK	23,872,550.00	
Production & Overhead Costs	<u>255,331,412.05</u>	(319,029,969.03)
Closing Balance		<u><u>11,148,779.97</u></u>

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED
STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31.3.2016

	Kyats 31.3.2016
Cash flows from operating activities	
Net profit/(loss) before taxation	188,783,656.82
Adjustments for:	
Depreciation / Amortisation	95,897,630.90
Exchange adjustment	365,391,952.08
Operating profit/(loss) before working capital changes	650,073,239.80
(Increase)/Decrease in trade & Others receivables	(12,852,545,095.28)
(Increase)/Decrease in Inventory / GIT	(21,303,831.00)
Increase/(Decrease) in payables	5,032,678,619.03
Cash generated from operations	(7,191,097,067.45)
Interest paid	-
Income tax paid	-
Net cash flow from operating activities	(7,191,097,067.45)
Cash flows from investing activities	
Purchase of property, plant and equipment	(123,936,348.00)
Proceeds from sale of equipment	
Net cash used in investing activities	(123,936,348.00)
Cash flows from financing activities	
Proceeds from issuance of share capital	-
Proceeds from from long-term borrowings	-
Dividend paid	-
Net cash flows from financing activities	-
Net (increase)/(decrease) in cash and cash equivalents	(7,315,033,415.45)
Cash and cash equivalents at beginning of the year	7,516,488,791.60
Cash and cash equivalents at end of the year	201,455,376.15

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED
STATEMENT OF CHANGES IN EQUITY AS AT 31.3.2016

	KYATS		
	Share Capital	Retained Earnings	Total
At 31 March 2015	5,100,000.00	1,195,450,787.52	1,200,550,787.52
Exchange Gain		365,391,952.08	365,391,952.08
Net Profit for the year 2015-2016		188,783,656.82	188,783,656.82
At 31 March 2016	5,100,000.00	1,749,626,396.42	1,754,726,396.42

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Notes to the Accounts for the year ended 31.3.2016

(1) Presentation of Financial Statement

Financial Statement of " Myanmar Chemical & Machinery Co.,Ltd. " are prepared in accordance with Myanmar Accounting Standard.

(2) Accounting Policy

Financial Statement are based on Historical Cost Convention.

Note		Kyats
1 Tangible Assets		<u>608,684,782.00</u>
Details are shown in Sch-5		
2 Deem Profit Adjustment		<u>14,064,362.00</u>
Deem Profit Adjustment up to (2011-2012) financial year.		
3 Rubber Planting		<u>117,463,855.00</u>
Immature Rubber (2-5 years)	55,227,610.00	
Replanting Rubber (1 year)	62,236,245.00	
	<u>117,463,855.00</u>	
4 Preliminary Expenses		<u>1,028,000.00</u>
Preliminary Expenses for Rubber Planting Project.		
5 Deposit		<u>15,279,813,744.28</u>
Deposit for Rental Of Thahtone	1,200,000.00	
Receivable - PG Deposit (US\$ 12,545,211.78)	15,278,613,744.28	
	<u>15,279,813,744.28</u>	
6 Receivable		<u>37,960,980.00</u>
Receivable for Rubber Planting Expenses		
7 Advance Payment		<u>766,589,657.00</u>
Advance Income Tax (2012-2013) FY	200,000.00	
Advance Commercial Tax (2012-2013) FY	200,000.00	
Advance Commercial Tax (2012-2013) FY	6,493,926.00	
Advance Income tax on Fixed Assets Purchase(13-14)	9,201,218.00	
Advance Income tax for Import - Custom(14-15)	202,798,932.00	
Withholding tax for (14-15) Construction Income	218,488,580.00	
Withholding tax for (14-15) Vehicle Sales	37,809,219.00	
Advance Income tax for Truck Crane fixed assets	10,762,015.00	
Advance Income tax for Mobile Crane fixed assets	2,860,280.00	
Withholding tax for (15-16) Construction Income	65,035,580.00	

Advance Commercial tax for (15-16) Construction Income	154,846,619.00	
Withholding tax for Import Sales (15-16)	9,426,160.00	
Advance Commercial tax for Import Sales (15-16)	23,393,000.00	
Advance Income tax for Import - Custom(15-16)	2,683,565.00	
Advance Commercial tax for Import - Custom(15-16)	6,776,063.00	
Advance Commercial tax for Caustic Soda Project	1,489,100.00	
Withholding tax for Caustic Soda Project	625,400.00	
Advance Payment for shop rental (9) Months	13,500,000.00	
	<u>766,589,657.00</u>	
8 Cash at Bank		<u>145,600,002.08</u>
Cash at Bank (MFTB US\$ 118,846.63)	144,517,502.08	
Cash at Bank (MICB US\$ 100)	82,500.00	
Cash at Bank (NPT - Kyats)	1,000,000.00	
	<u>145,600,002.08</u>	
Bank Closing Balance as at 31.3.2016 was found to be correct by Bank Pass Book.		
9 Cash in Hand - Rubber Project		<u>11,148,779.97</u>
Rubber office Cash Balance	4,445,427.97	
Estate Cash Balance	6,703,352.00	
	<u>11,148,779.97</u>	
10 Cash in Hand		<u>44,706,594.10</u>
Physical cash balance as at 31.3.2016 was approved by B.O.D		
11 Authorized Capital		<u>500,000,000.00</u>
(50000 shares @ 10000 Ks)		
12 Issued & Paid up Capital		<u>5,100,000.00</u>
(510 Shares @ 10,000 Ks)		
13 Retained Earning Account		<u>1,749,626,396.42</u>
Details are shown in Sch (8)		
14 Provision for Commercial tax		<u>203,708,252.00</u>
Prov: for Commercial tax of (2012-2013) FY's sales.	8,910,181.00	
Prov: for Commercial tax of (2013-2014) FY's sales.	2,395,119.00	
Prov: for Commercial tax of (2014-2015) FY's sales.	5,714,285.00	
Prov: for Commercial tax of (2015-2016) FY's sales.	186,688,667.00	
	<u>203,708,252.00</u>	

15 Payable		<u>15,068,626,108.01</u>
Payable for (2015-2016) financial year's audit fee.	2,500,000.00	
Payable for Import Purchase (14-15) (US\$ 1,919,164.95)	1,919,164,950.00	
Payable for Import Purchase (15-16) (US\$ 157,492.16)	191,825,446.01	
Payable to MCM Pacific Pte (US\$ 10,653,894.50)	12,955,135,712.00	
	<u>15,068,626,108.01</u>	

16 Revenue		<u>3,763,736,043.00</u>
Relevant Documents for Operating Income were presented by B.O.D but some income were provided by credit vouchers only.		

17 Operating Expenses		<u>3,436,741,328.06</u>
Relevant Vouchers for Operating Expenses were presented by B.O.D but some expenses were provided by debit vouchers only.		

18 Administrative Expenses		<u>132,025,231.84</u>
Relevant Vouchers for Operating Expenses were presented by B.O.D but some expenses were provided by debit vouchers only.		

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

FINAL ACCOUNT

AND

AUDIT REPORT

(2014 - 2015)





Myanmar Chemical & Machinery Co., Ltd.

No. 1120/1121, Thumingalar Road, 16/4 Quarter, Thingangyun Tsp, Yangon, Myanmar.
Tel : 95-1-562020, 562021 Fax: 95-1-577148, 562131 E-mail: mcm@myanmar.com.mm

STATEMENT OF THE DIRECTORS

We and being two Directors of...
Myanmar Chemical & Machinery Co., Ltd ...do here by state that, in the opinion of the
Directors, the accompanying Accounts made up to March 31st, 2015. Schedules and Notes to the
Accounts are drawn up so as to give a true and fair view of the state of affair of the Company, and of the
result of the Company for the year ended on the date of this statement. Entries of the responsible persons
of the Company as to receipt and payment, and documents concerned assigned to **Ngwe Inzaly Audit**
Firm for auditing of Final yearly account for the financial year, **2014 - 2015** We believe
that the Company will be able to pay its debts as and when they fall due, and all accounts receivable are
good and recoverable.

We admitted that the auditing done on the submission of our data presented is right. If there is the
occurrence of Income-bearing business besides the said account, It is the obligations of all the share holders
of the Company

We support that the facts above mentioned are true and correct according to section 133 (1) (2)
of the Myanmar Company Act



On behalf of the Board

[Signature]

Daw Khin Nwe Mar Tun
Director
Myanmar Chemical & Machinery Co., Ltd.

[Signature]
U Aye Hsing Co
Managing Director
Myanmar Chemical & Machinery Co., Ltd.

27 APR 2016

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED
STATEMENT OF FINANCIAL POSITION AS AT 31.3.2015

2013-2014 Kyats		Note	2014-2015 Kyats
	Assets		
	Non-Current Assets		
536,712,918.00	Tangible Assets	1	580,646,064.90
	Intangible Assets		
14,064,362.00	Deem Profit Adjustment	2	14,064,362.00
	Current Assets		
114,796,890.00	Rubber Planting	3	74,663,624.00
239,619,435.63	Inventory	4	21,496,400.00
1,028,000.00	Preliminary Expenses	5	1,028,000.00
713,924,160.00	Deposit	6	2,627,746,880.00
-	Receivable	7	82,129,930.00
18,495,144.00	Advance Payment	8	521,942,476.00
546,395,604.00	Cash at Bank	9	346,577,072.50
912,312.00	Cash in Hand - Rubber Project	10	5,767,132.00
2,278,582.10	Cash in Hand	11	7,164,144,587.10
2,188,227,407.73	Total Assets		11,440,206,528.50
	Equity & Liabilities		
500,000,000.00	Authorized Capital	12	500,000,000.00
	(50000 shares @ 10000 Ks)		
5,100,000.00	Issued & Paid up Capital	13	5,100,000.00
	(510 Shares @ 10,000 Ks)		
(6,790,568.27)	Retained Earning Account	14	1,195,450,787.52
	Current Liabilities		
11,305,300.00	Provision for Commercial tax	15	17,019,585.00
438,612,676.00	Payable	16	10,222,636,155.98
1,740,000,000.00	Creditors		-
2,188,227,407.73	Total Equity & Liabilities		11,440,206,528.50

Myanmar Chemical & Machinery Co., Ltd.

Daw Khin Nwe Mar Tun
Daw Khin Nwe Mar Tun
 Director

Myanmar Chemical & Machinery Co., Ltd.



Daw Aye Thida
DAW AYE THIDA
 B.Com (Q), CPA
 Accountant and Auditor
 Rm(801), Tower(8), 8th Floor,
 50th Street, Condo (A&P),
 Bet : Mahabandoola Road & Merchant Road



NGWE INZALY

Audit Firm

Room. 801, Tower B,
50th Street Condominium (AMPS), 50th Street,
Between Maha Bandula Road & Merchant Road,
Botahtaung Township, Yangon, Myanmar.

Tel : 095000752, 095119742, 0973049312
095342805, 397424, 397575
Gmail : ngweinzali@gmail.com
Website : www.ngweinzalyaudit.com

AUDITOR'S REPORT

MANAGING DIRECTOR

MYANMAR CHEMICAL & MACHINERY CO., LTD

We have audited the accompanying balance sheet of the Myanmar Chemical & Machinery Co., Ltd as of March 31, 2015 and income statement, statement of change in equity and cash flow statement for the year then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with Myanmar Standards on Auditing. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In accordance with the Section 145(1)(2) of the Myanmar Companies Act, we report that :

In our opinion,

(1) Subject to our notes to the Financial Statements, the Company's accounts and statements are properly drawn up in conformity with the provisions of the Myanmar Companies Act and Myanmar Accounting Standards so as to exhibit a true and fair view of the financial position of the Company as of March 31, 2015 and of its financial performance and its cash flows for the year then ended, according to informations and explanations given to us.

(2) Our audit has been conducted based on the books and records provided by the Company, have been maintained according to Section 130 of the Myanmar Companies Act.

AUDITOR

Date: 7 APR 2016
Yangon.




DAW AYE THIDA
B.Com (Q), C.P.A
Accountant and Auditor
Rm(801), Tower(B), 8th Floor,
50th Street Condo (AMPS),
Bet : Mahabandoola Road & Merchant Road

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED
STATEMENT OF COMPREHENSIVE INCOME
FOR THE YEAR ENDED 31-3-2015

		Kyats
Revenue	<i>Sch-1</i>	21,830,517,532.00
Less: Operating Expenses	<i>Sch-2</i>	(20,470,645,025.61)
Gross Profit / (Loss)		<u>1,359,872,506.39</u>
Add: Exchange Gain	<i>Sch-7.2</i>	68,912,008.50
Less: Depreciation for the year	<i>Sch-5</i>	(65,300,500.50)
Less: Administrative Expenses	<i>Sch-6</i>	(178,230,834.00)
Net Profit / (Loss)		<u>1,185,253,180.39</u>
Add: Capital Gain	<i>Sch-5.2</i>	17,420,975.40
Net Profit after Capital Gain		<u><u>1,202,674,155.79</u></u>


 U Aung Hlaing Oo
 Managing Director
 Myanmar Chemical & Machinery Co., Ltd.




 DAW AYE THIDA
 B.Com (Q), C.P.A
 Accountant and Auditor
 Rm(801), Tower(H), 8th Floor,
 50th Steel Condo (AMPS),
 88et / Mahabudoola Road & Merchant Road


 Daw Khin Nwe Mar Tun
 Director
 Myanmar Chemical & Machinery Co., Ltd.

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

		Sch-1
Revenue		Kyats
Construction Income	<i>Sch-2</i>	10,924,429,000.00
Import Sales	<i>Sch-3.1</i>	10,626,189,620.00
Rubber Sales	<i>Sch-4.1</i>	165,613,197.00
Service Income for Tender Processing (US\$ 120,000)	120,000,000.00	
Less: Provision for Commercial tax	(5,714,285.00)	114,285,715.00
		<u><u>21,830,517,532.00</u></u>

		Sch-1.1
Operating Expenses		Kyats
Costs for Construction	<i>Sch-2.1</i>	10,178,235,545.00
Import Costs of Goods Sold	<i>Sch-3</i>	9,721,460,079.00
<u>Expenses for Rubber Sales</u>		
Production Expenses	<i>Sch-4</i>	517,342,446.24
Overhead Expenses	<i>Sch-4.2</i>	53,606,955.37
		<u><u>20,470,645,025.61</u></u>

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Sch-2

Construction Income

Kyats

Piping Works - (မြင်းခြံသံမဏိစက်ရုံ)

6,747,282,000.00

Piping Works - (မြင်းခြံသံမဏိစက်ရုံ)

4,177,147,000.00

10,924,429,000.00

Sch-2.1

Costs for Construction

Kyats

Direct Material Expenses

8,495,467,680.00

Direct Labour Expenses

970,697,470.00

Crane Charges

481,015,000.00

Indirect Expenses

231,055,395.00

10,178,235,545.00

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Construction Income Schedule

Sch-2.2

Sr.	Project Name	Contract Value (Ks)	Withholding	Remark
	Piping Works - (မြင်းခြံသံမဏိစက်ရုံ)	6,747,282,000.00	134,945,640.00	
	Piping Works - (မြင်းခြံသံမဏိစက်ရုံ)	4,177,147,000.00	83,542,940.00	
		10,924,429,000.00	218,488,580.00	

Withholding tax Schedule

Sch-2.3

Sr.	Project Name	Cash Received	Withholding tax	Date
1	Piping Works - (မြင်းခြံသံမဏိစက်ရုံ)	2,418,760,000.00	48,375,200.00	31.12.2014
2	Piping Works - (မြင်းခြံသံမဏိစက်ရုံ)	1,429,476,000.00	28,589,520.00	13.1.2015
3	Piping Works - (မြင်းခြံသံမဏိစက်ရုံ)	1,598,320,000.00	31,966,400.00	6.2.2015
4	Piping Works - (မြင်းခြံသံမဏိစက်ရုံ)	1,639,633,000.00	32,792,660.00	16.3.2015
5	Piping Works - (မြင်းခြံသံမဏိစက်ရုံ)	2,161,113,000.00	43,222,260.00	16.3.2015
6	Piping Works - (မြင်းခြံသံမဏိစက်ရုံ)	584,689,000.00	11,693,780.00	24.3.2015
7	Piping Works - (မြင်းခြံသံမဏိစက်ရုံ)	674,724,000.00	13,494,480.00	25.3.2015
8	Piping Works - (မြင်းခြံသံမဏိစက်ရုံ)	417,714,000.00	8,354,280.00	25.3.2015
		10,924,429,000.00	218,488,580.00	

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Sch-3

Import Costs of Goods Sold

Kyats

Import Purchase	\$	8,479,164.95	8,479,164.950.00
<u>Import Direct Expenses</u>			
Commercial tax		569,228,731.00	
Import Duty		172,877,964.00	
Other tax		238,162,924.00	
Security fee		1,680,000.00	
Import Expenses for fertilizer		2,944,850.00	
Agent fee		12,060,000.00	
Container Charges		13,100,000.00	
Custom Clearance Charges		3,201,400.00	
Demurrage Charges		80,021,160.00	
Detention Charges		42,768,000.00	
General Expenses		7,722,890.00	
Labour Charges		6,858,700.00	
Licence fee		680,000.00	
Port Charges		509,310.00	
Release Order fee		110,000.00	
Transport Charges		90,369,200.00	
			1,242,295,129.00
			<u>9,721,460,079.00</u>

Sch-3.1

Import Sales

Kyats

Import Sales (Light Truck - 200 Nos)	\$	1,720,000.00	1,890,460,920.00
Import Sales (Deformed Bar - 20,515.15 Tons)	\$	6,720,414.95	8,668,152,300.00
Import Sales (Fertilizer - 250 Tons)	\$	38,750.00	67,576,400.00
		<u>8,479,164.95</u>	<u>10,626,189,620.00</u>

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Import Purchase Schedule (Light Truck 200 Units)

Sch-3.2

Sr.	Description	Unit	Qty	Amt (US\$)	Import Sales (Ks)	WT (Ks)	Import Duty	Commercial Tax	Other Tax	2% Tax	Security Fees
1	<u>Brand New Light Truck(4x2)</u> Brand :Foton (Aumark F1), Model 2012	U	50.00	430,000.00	472,615,230.00	9,452.305	28,890.000	49,594,500	116,362,500	19,260,000	500,000
2	<u>Brand New Light Truck(4x2)</u> Brand :Foton (Aumark F1), Model 2012	U	50.00	430,000.00	472,615,230.00	9,452.305	28,890.000	49,594,500	116,362,500	19,260,000	500,000
3	<u>Brand New Light Truck(4x2)</u> Brand :Foton (Aumark F1), Model 2012	U	50.00	430,000.00	472,615,230.00	9,452.304	16,680,750	28,635,288	2,718,962	-	340,000
4	<u>Brand New Light Truck(4x2)</u> Brand :Foton (Aumark F1), Model 2012	U	50.00	430,000.00	472,615,230.00	9,452.305	16,680,750	28,635,288	2,718,962	-	340,000
	Total		200.00	1,720,000.00	1,890,460,920.00	37,809.219	91,141,500	156,459,576	238,162,524	38,520,000	1,680,000

Import Purchase Schedule (Deformed Bar)

Sch-3.3

Sr.	Description	Unit	Qty	Amt (US\$)	Import Sales (Ks)	WT (Ks)	Import Duty	Commercial Tax	Other Tax	2% Tax	Security Fees
5	<u>Deformed Bar</u> D32	MT	459.97	160,989.50	8,668,152,300.00		1,795.722	9,068,401	-	3,591,446	-
6	<u>Deformed Bar</u> D12	MT	3,964.55	1,387,591.45			42,561,168	214,933,902	-	85,122,337	-
	D14	MT	793.32	277,660.25							
	D16	MT	6,099.58	2,134,852.65							
7	<u>Deformed Bar</u> D18	MT	798.10	239,430.90			37,579,574	188,766,852	-	74,759,149	-
	D20	MT	3,808.77	1,142,631.30							
	D22	MT	792.84	237,851.40							
	D25	MT	3,798.03	1,139,407.50							
	Total		20,515.15	6,720,414.95	8,668,152,300.00		81,736,464	412,769,155	-	163,472,932	-

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Import Purchase Schedule (Fertilizer)											Sch-3.4
Sr.	Description	Unit	Qty	Amt (US\$)	Import Sales (Ks)	WT (Ks)	Import Duty	Commercial Tax	Other Tax	2% Tax	Security Fees
10	Compound Fertilizer	Kg	250,000.00	38,750.00	67,576,400.00		-	-		806,000	
	Total			38,750.00	67,576,400.00		-	-	-	806,000	-

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Sch-4

Manufacturing Account for the year ended 31.3.2015

Rubber Planting Project

Kyats

Direct Labour (Tapping Charges)	60,370,624.00	
Direct Material	865,720.00	
Direct Expenses	<u>1,800,000.00</u>	63,036,344.00
Rubber Estate Salary		166,879,698.63
<u>Processing Expenses</u>		
Indirect Expenses	3,971,300.00	
Fixed Expenses	8,905,742.98	
Travelling Charges	115,000.00	
Machine Repair Charges	<u>291,860.00</u>	13,283,902.98
Depreciation for the year		34,523,065.00
Production Costs for (828.148 lbs)		<u>277,723,010.61</u>
Add: Deferred Expenses for Opening Inventory (140,845.80 lbs)		239,619,435.63
Deferred Expenses (140,845.80 lbs)		<u><u>517,342,446.24</u></u>

Direct Material

Kyats

Purchase	22,362,120.00
Less: Closing Inventory	(21,496,400.00)
	<u><u>865,720.00</u></u>

Sch-4.1

Sales Income

Kyats

Rubber Sales	<u><u>165,613,197.00</u></u>
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MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

<u>Administrative Expenses - Rubber</u>	Sch-4.2 Kyats
Office Salary	30,592,982.00
Office Accessories	1,369,950.00
Drinking Expenses	144,040.00
Phone Expenses	296,197.00
Meter Bill & YCDC Tax Charges	554,980.00
Internet Bill	1,383,298.00
Fuel Expenses	4,683,500.00
General Expenses	2,311,951.00
Stationery	782,040.00
Postage and Telex Charges	39,600.00
Medical Expenses	500,000.00
Staff Welfare	2,810,000.00
Donation Expenses	227,582.00
Painting Expenses	630,000.00
Entertainment Expenses	1,830,989.00
Hotel Charges	864,600.00
Travelling Expenses	53,240.00
Meal Expenses	1,247,000.00
Rent Charges	2,400,000.00
Bank Service Expenses	260,706.37
Repair & Maintenance	624,300.00
	<hr/> <hr/> 53,606,955.37 <hr/> <hr/>

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Rubber Planting Expenses Deferred

Sch-4.3

Description	13-14	14-15	Receivable	Closing Bal:
Immature Rubber (2-5 years)	73,360,065.00	17,252,450.00	52,159,685.00	38,452,830.00
Replanting Rubber (1 year)	41,436,825.00	3,247,814.00	8,473,845.00	36,210,794.00
	114,796,890.00	20,500,264.00	60,633,530.00	74,663,624.00

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Rubber Sales Income Schedule

Sch-4.4

Sr.	Month	RSS - 1		RSS - 2		RSS - 3		RSS - 4		RSS - 5		Cutting		Forth		Coplump		Grand Total	
		Lbs	Amt (Kyats)	Lbs	Amt (Kyats)	Lbs	Amt (Kyats)	Lbs	Amt (Kyats)	Lbs	Amt (Kyats)	Lbs	Amt (Kyats)	Lbs	Amt (Kyats)	Lbs	Amt (Kyats)	Lbs	Amt (Kyats)
1	April	38,452	31,502,040	4,619	3,968,510	7,347.70	5,346,266	8,815	7,368,760	27,150	22,318,500	263	159,750	18.00	9,900	31,846.10	12,857,796	118,510.80	83,531,522
2	May	1,970	1,182,000	3,410	1,977,800	4,683.00	2,622,480	1,095	613,200	3,127	1,751,120	1	550	-	-	3,978.00	974,610	18,264.00	9,121,760
3	June	-	-	-	-	30.00	16,800	-	-	-	-	-	-	-	-	20,434.00	5,029,970	20,464.00	5,046,770
4	July	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	August	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	September	1,482	992,940	-	-	-	-	990	603,900	2,820	1,698,600	-	-	-	-	1,140.00	287,100	6,432.00	3,582,540
7	October	4,729	3,073,850	-	-	1,650.00	1,006,500	1,603	961,800	5,243	3,145,800	-	-	-	-	3,550.00	852,000	16,775.00	9,039,950
8	November	2,583	1,678,950	-	-	3,944.00	2,331,520	2,818	1,615,900	6,786	3,549,520	-	-	-	-	3,203.00	761,670	19,334.00	9,937,560
9	December	23,389	14,385,820	5,700	3,475,000	4,836.00	2,821,760	1,116	613,800	9,459	4,987,020	-	-	-	-	3,783.00	924,630	48,283.00	27,208,030
10	January	5,484	3,564,600	-	-	1,850.00	980,500	660	316,800	5,158	2,521,390	-	-	-	-	1,912.00	427,580	15,064.00	7,810,870
11	February	1,870	1,028,500	1,536	844,800	4,278.00	2,267,340	550	275,000	835	400,800	-	-	-	-	1,296.00	259,200	10,365.00	5,075,640
12	March	-	-	4,099	2,438,905	263.00	154,550	550	294,250	3,569	2,014,810	-	-	-	-	1,356.00	356,040	9,837.00	5,258,555
		79,959	57,408,700	19,364	12,705,015	28,881.70	17,547,716	18,197	12,663,410	64,147	42,387,560	264	160,300	18.00	9,900	72,498.10	22,730,596	283,328.80	165,613,197

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Tangible Assets Less Depreciation

Sch-5

Sr.	Description	Qty	Original Costs			Rate	Depreciation			Disposal Sales	Net Book Value
			Pre: year	For the year	Total		Pre: year	For the year	Total		
1	<u>Furniture</u>										
	Chair	10	42,000.00		42,000.00	10%	-	4,200.00	4,200.00		37,800.00
	Chair	4		23,200.00	23,200.00	10%	-	-	-		23,200.00
					-			-	-		-
2	<u>Machinery & Equipment</u>										
	Projector	1	447,150.00		447,150.00	10%	-	44,715.00	44,715.00		402,435.00
	Tractor	2	59,600,000.00		59,600,000.00	20%	-	11,920,000.00	11,920,000.00		47,680,000.00
	Ploughshare	2	4,860,000.00		4,860,000.00	20%	-	972,000.00	972,000.00		3,888,000.00
	Cooker	1	26,000.00		26,000.00	10%	-	2,600.00	2,600.00		23,400.00
	Tractor	4	107,200,000.00		107,200,000.00	20%	-	21,440,000.00	21,440,000.00		85,760,000.00
	TP-Link Wireless	2		42,000.00	42,000.00			-	-		42,000.00
					-			-	-		-
3	<u>Computer Equipment</u>										
	Computer	1	482,000.00		482,000.00	10%	-	48,200.00	48,200.00		433,800.00
	Computer	1	436,500.00		436,500.00	10%	-	43,650.00	43,650.00		392,850.00
	Computer	1	477,000.00		477,000.00	10%	-	47,700.00	47,700.00		429,300.00
	Computer	1		610,800.00	610,800.00		-	-	-		610,800.00
					-			-	-		-
4	Mining Tipper	1	54,658,898.00		54,658,898.00	10%	-	5,465,889.80	5,465,889.80	49,193,008.20	-
	Mining Tipper	1	54,658,898.00		54,658,898.00	10%	-	5,465,889.80	5,465,889.80	49,193,008.20	-
	Mining Tipper	1	54,658,898.00		54,658,898.00	10%	-	5,465,889.80	5,465,889.80	49,193,008.20	-
	Mining Tipper	1	54,658,898.00		54,658,898.00	10%	-	5,465,889.80	5,465,889.80		49,193,008.20
	Mining Tipper	1	54,658,898.00		54,658,898.00	10%	-	5,465,889.80	5,465,889.80		49,193,008.20
	Mining Tipper	1	88,547,778.00		88,547,778.00	10%	-	8,854,777.80	8,854,777.80		79,693,000.20

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Tangible Assets Less Depreciation

Sch-5

Sr	Description	Qty	Original Costs			Rate	Depreciation			Disposal Sales	Net Book Value
			Pre: year	For the year	Total		Pre: year	For the year	Total		
5	Motor Cycle	1		680,000.00	680,000.00	10%	-	-	-		680,000.00
6	Office Furniture & Utting										
	Bedsheet (3.25'x6.8'x2')	3		102,000.00	102,000.00	10%	-	-	-		102,000.00
	Office Table (3'x4'x2.5')	1		15,000.00	15,000.00	10%	-	-	-		15,000.00
7	Truck Crane	3		291,162,737.00	291,162,737.00	10%	-	29,116,273.70	29,116,273.70		262,046,463.30
	Total		535,412,918.00	292,635,737.00	828,048,655.00		-	99,823,565.50	99,823,565.50	147,579,024.60	580,646,064.90

We hereby certify that the above Tangible assets are the properties of "Myanmar Chemical & Machinery Co., Ltd" and in existence at March 31, 2015. The detailed inventory produced includes all Tangible assets purchased with proper capital expenditure budget and sanction of the board of directors.

Tangible Assets Register is not Maintained.



(Signature)
(General Manager/Director)
Daw Khin Nye Mar Linn
Director

Myanmar Chemical & Machinery Co., Ltd.

(Signature)
(Finance Manager/Managing Director)
U Aung Mying Co
Managing Director
Myanmar Chemical & Machinery Co., Ltd.

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Sch-5.1

Purchase of Tangible Assets During the year
Truck Crane (3) Nos

Kyats

Import Purchase	S	254,718.00	254,718,000.00
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Import Direct Expenses

Import Duty		9,085,660.00	
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Commercial tax		27,359,077.00	
----------------	--	---------------	--

36,444,737.00

291,162,737.00

Sch-5.2

Disposal Account

Kyats

Mining Tipper (3) Nos			165,000,000.00
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Less: Net Book Value	Sch-5		(147,579,024.60)
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Disposal Gain			17,420,975.40
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MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Sch-6

Administrative Expenses	Fertilizer	Shop	Office Expenses	Kyats
Advertising Expenses	496,560.00	2,276,200.00		2,772,760.00
Hotel Charges			389,000.00	389,000.00
Store Expenses	13,728,000.00	-		13,728,000.00
Transport Charges	6,852,000.00	-		6,852,000.00
Labour Charges	342,000.00	-		342,000.00
Entertainment	223,900.00	61,450.00	11,035,274.00	11,320,624.00
Donation Expenses			5,222,500.00	5,222,500.00
Present & Gift Expenses			18,563,375.00	18,563,375.00
Phone Expenses	3,000.00	20,000.00	2,411,975.00	2,434,975.00
Meter Bill Expenses			936,240.00	936,240.00
Fuel Expenses	590,200.00	832,350.00		1,422,550.00
General Expenses	301,350.00	385,850.00	1,317,445.00	2,004,645.00
Drinking Water	1,800.00	-	173,250.00	175,050.00
Stationary Expenses	6,800.00	52,550.00	3,805,255.00	3,864,605.00
Newspaper & Others			58,500.00	58,500.00
Postage & Telex Charges	3,500.00	-	128,200.00	131,700.00
Kitchen Charges			3,550,400.00	3,550,400.00
Medical Expenses			491,525.00	491,525.00
Tender Documents Expenses			560,000.00	560,000.00
Salary Expenses			71,500,000.00	71,500,000.00
Bank Charges		320,250.00	19,301,100.00	19,621,350.00
Electrical Expenses		377,600.00		377,600.00
Meal Expenses		76,750.00		76,750.00
Office Expenses		124,730.00	2,969,955.00	3,094,685.00
Sign Board Expenses		420,000.00		420,000.00
Travelling Expenses		45,700.00	774,300.00	820,000.00
Shop Rental Charges		4,500,000.00		4,500,000.00
Audit fee		3,000,000.00		3,000,000.00
	<u>22,549,110.00</u>	<u>12,493,430.00</u>	<u>143,188,294.00</u>	<u>178,230,834.00</u>

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

MFTB Bank Statement

Sch-7

Description	Debit		Credit	
	US\$	Equv. Kyats	US\$	Equv. Kyats
Opening Balance	569,076.15	546,313,104.00		
Transfer Purchase	1,101,884.78	1,101,884,780.00		
Bank Charges			17,613.57	17,613,570.00
Transfer Sales			600,000.00	600,000,000.00
PG Deposit / Refund	36,020.00	36,020,000.00	2,662,566.88	2,662,566,880.00
PG Refund (pre:year)	740,733.47	740,733,470.00		
Payable to MCM Pte	1,369,990.23	1,369,990,230.00		
Receivable from MCM Pte			208,481.73	208,481,730.00
Exchange Gain		39,215,168.50		
Closing Balance			329,042.45	345,494,572.50
	3,817,704.63	3,834,156,752.50	3,817,704.63	3,834,156,752.50

Sch-7.1

Bid Bond Deposit	US\$	Kyats
Bid Bond Deposit (Opening Balance)	742,421.00	712,724,160.00
Received back - MICB Bank	(740,733.47)	(740,733,470.00)
Bank Charges	(1,687.53)	(1,687,530.00)
Exchange Gain		<u>(29,696,840.00)</u>
Bid Bond Deposit (for the year)	2,662,566.88	2,662,566,880.00
Received back - MICB Bank	(36,020.00)	(36,020,000.00)
Closing Balance	<u>2,626,546.88</u>	<u>2,626,546,880.00</u>

Sch-7.2

Exchange Gain	Kyats
MICB Bank	29,696,840.00
Bid Bond Account	39,215,168.50
	<u>68,912,008.50</u>

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Retained Earning Account	Sch-8 Kyats
Net Profit / (Loss) After Assessment (2001-2002)	-
Net Profit / (Loss) After Assessment (2002-2003)	-
Net Profit After Assessment (2003-2004)	911,742.00
Net Profit After Assessment (2004-2005)	778,330.00
Net Profit After Assessment (2005-2006)	775,865.00
Net Profit Before Assessment (2006-2007)	100,270.00
Net Profit After Assessment (2007-2008)	1,113,958.00
Net Profit After Assessment (2008-2009)	1,150,952.00
Net Profit After Assessment (2009-2010)	1,670,923.00
Net Profit After Assessment (2010-2011)	2,716,794.00
Net Profit After Assessment (2011-2012)	2,964,962.00
Exchange Reserve	81,900.00
Net Profit (2012-2013)	10,552,258.00
Net Loss (2013-2014)	(29,608,522.27)
Previous year profit & loss adjustment	(432,800.00)
Net Profit (2014-2015)	1,202,674,155.79
	<u>1,195,450,787.52</u>

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Sch-9

CASH SUMMARY STATEMENT

Kyats

Opening Balance	2,278,582.10	
Add: Import Sales Sales	10,604,693,220.00	
Construction Income	10,924,429,000.00	
Transfer Sales	600,000,000.00	
Disposal Sales	165,000,000.00	
Received back from Rubber Planting Project	91,039,022.00	
	<hr/>	22,387,439,824.10
Less: Paid to Creditors	1,740,000,000.00	
Withdraw from Rubber Planting Project	266,146,566.00	
Transfer Purchase	1,101,884,780.00	
Construction Costs for Myinchan Project	10,178,235,545.00	
Import Direct Expenses	1,242,295,129.00	
Advance Income tax - Custom	202,798,932.00	
Withholding tax for Construction Income	218,488,580.00	
Withholding tax for Vehicle Sales	37,809,219.00	
Advance Income tax for Truck Crane	10,762,015.00	
Direct Expenses for Truck Crane	36,444,737.00	
Office Rental Charges	36,000,000.00	
Previous year payable	1,000,000.00	
Administrative Expenses	151,429,734.00	(15,223,295,237.00)
	<hr/>	
Closing Balance		7,164,144,587.10

Payable to MCM Pacific Pte

US\$

Equv: Kyats

Received - MIFB Bank	1,369,990.23	1,369,990,230.00
Paid for Behalf of MCM Pacific Pte - MIFB	(208,481.73)	(208,481,730.00)
Service Income for Office Management from MCM Pacific Pte	(120,000.00)	(120,000,000.00)
	<hr/>	
	1,041,508.50	1,041,508,500.00

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Sch-9.1

CASH SUMMARY STATEMENT (Rubber)

Kyats

Opening Balance	912,312.00	
Add: From Head Office - TGK	266,146,566.00	
Ruber Sales Income	165,613,197.00	
		432,672,075.00
Less: Rubber Planting Expenses - Immature	17,252,450.00	
Rubber Planting Expenses - Replanting	3,247,814.00	
Assets Purchase for the year	1,473,000.00	
Previous year payable	21,098,985.00	
Repay to Head Office - TGK	91,039,022.00	
Production Costs	237,231,358.63	
Overhead Costs	51,073,727.37	
Advance pay for Replanting	4,488,586.00	
		(426,904,943.00)
Closing Balance		5,767,132.00

Profit & Loss Adjustment for previous year

Kyats

Profit & Loss - Internet Payable	132,800.00
Profit & Loss - Phone	1,300,000.00
Profit & Loss - Cash at Bank	(1,000,000.00)
	432,800.00

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Sch-9.2

Payable for Rubber Planting Project

Kyats

Meter Bill	68,200.00
Phone Bill	5,900.00
Internet Bill	59,125.00
Payable for Fixed Expenses	5,968,586.98
Payable for Fertilizer	21,496,400.00
	<hr/>
	27,598,211.98
	<hr/>

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED
STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31.3.2015

	Kyats 31.3.2015
Cash flows from operating activities	
Net profit/(loss) before taxation	1,202,674,155.79
Adjustments for:	
Depreciation / Amortisation	99,823,565.50
Fixed Assets write off	1,300,000.00
Disposal Profit	(17,420,975.40)
Opening adjustment	(432,800.00)
Operating profit/(loss) before working capital changes	1,285,943,945.89
(Increase)/Decrease in trade & Others receivables	(2,499,399,982.00)
(Increase)/Decrease in Inventory / GIT	258,256,301.63
Increase/(Decrease) in payables	8,049,737,764.98
Cash generated from operations	7,094,538,030.50
Interest paid	-
Income tax paid	-
Net cash flow from operating activities	7,094,538,030.50
Cash flows from investing activities	
Purchase of property, plant and equipment	(292,635,737.00)
Proceeds from sale of equipment	165,000,000.00
Net cash used in investing activities	(127,635,737.00)
Cash flows from financing activities	
Proceeds from issuance of share capital	-
Proceeds from from long-term borrowings	-
Dividend paid	-
Net cash flows from financing activities	-
Net increase/(decrease) in cash and cash equivalents	6,966,902,293.50
Cash and cash equivalents at beginning of the year	549,586,498.10
Cash and cash equivalents at end of the year	7,516,488,791.60

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED
STATEMENT OF CHANGES IN EQUITY AS AT 31.3.2015

	KYATS		
	Share Capital	Retained Earnings	Total
At 31 March 2014	5,100,000.00	(6,790,568.27)	(1,690,568.27)
Previous year profit & loss adjustment		(432,800.00)	(432,800.00)
Net Profit for the year 2014-2015		1,202,674,155.79	1,202,674,155.79
At 31 March 2015	<u>5,100,000.00</u>	<u>1,195,450,787.52</u>	<u>1,200,550,787.52</u>

MYANMAR CHEMICAL & MACHINERY COMPANY LIMITED

Notes to the Accounts for the year ended 31.3.2015

(1) Presentation of Financial Statement

Financial Statement of " Myanmar Chemical & Machinery Co.,Ltd. " are prepared in accordance with Myanmar Accounting Standard

(2) Accounting Policy

Financial Statement are based on Historical Cost Convention.

Note	Kyats
1 Tangible Assets	<u>580,646,064.90</u>
Details are shown in Sch-5	
2 Deem Profit Adjustment	<u>14,064,362.00</u>
Deem Profit Adjustment up to (2011-2012) financial year	
3 Rubber Planting	<u>74,663,624.00</u>
Immature Rubber (2-5 years)	38,452,830.00
Replanting Rubber (1 year)	36,210,794.00
	<u>74,663,624.00</u>
4 Inventory	<u>21,496,400.00</u>
Closing Inventory for Fertilizer to use rubber planting project.	
5 Preliminary Expenses	<u>1,028,000.00</u>
Preliminary Expenses for Rubber Planting Project.	
6 Deposit	<u>2,627,746,880.00</u>
Deposit for Rental Of Thahtone	1,200,000.00
Receivable - PG Deposit (US\$ 2,643,335.60)	2,626,546,880.00
	<u>2,627,746,880.00</u>
7 Receivable	<u>82,129,930.00</u>
Receivable for Rubber Planting Expenses	60,633,530.00
Receivable for Fertilizer Sales	21,496,400.00
	<u>82,129,930.00</u>
8 Advance Payment	<u>521,942,476.00</u>
Advance Income Tax (2012-2013) FY	200,000.00
Advance Commercial Tax (2012-2013) FY	200,000.00
Advance Commercial Tax (2012-2013) FY	6,493,926.00
Advance Income tax on Fixed Assets Purchase(13-14)	9,201,218.00
Advance Income tax for Import - Custom	202,798,932.00
Withholding tax for Construction Income	218,488,580.00
Withholding tax for Vehicle Sales	37,809,219.00
Advance Income tax for Truck Crane fixed assets	10,762,015.00
Advance Payment for shop rental (21) Months	31,500,000.00
Advance Pay for Replanting Rubber	4,488,586.00
	<u>521,942,476.00</u>

9 Cash at Bank		346,577,072.50
Cash at Bank (MFTB US\$ 329,042.45)	345,494,572.50	
Cash at Bank (MICB US\$ 100)	82,500.00	
Cash at Bank (NPT - Kyats)	1,000,000.00	
	<u>346,577,072.50</u>	
Bank Closing Balance as at 31.3.2015 was found to be correct by Bank Pass Book.		
10 Cash in Hand - Rubber Project		5,767,132.00
Rubber office Cash Balance	1,106,952.00	
Estate Cash Balance	4,660,180.00	
	<u>5,767,132.00</u>	
11 Cash in Hand		7,164,144,587.10
Physical cash balance as at 31.3.2015 was approved by B.O.D		
12 Authorized Capital		500,000,000.00
(50000 shares @ 10000 Ks)		
13 Issued & Paid up Capital		5,100,000.00
(510 Shares @ 10,000 Ks)		
14 Retained Earning Account		1,195,450,787.52
Details are shown in Sch (8) .		
15 Provision for Commercial tax		17,019,585.00
Prov: for Commercial tax of (2012-2013) FY's sales.	8,910,181.00	
Prov: for Commercial tax of (2013-2014) FY's sales.	2,395,119.00	
	<u>11,305,300.00</u>	
16 Payable		10,222,636,155.98
Payable for (2014-2015) financial year's audit fee.	3,000,000.00	
Payable for Import Purchase with TT Payment(12-13)	101,444,994.00	
Payable for Import Purchase with TT Payment(13-14)	315,201,500.00	
Payable for Import Purchase with TT Payment(14-15)	8,479,164,950.00	
Payable for Import Purchase with TT Payment(14-15)	254,718,000.00	
Payable to MCM Pacific Pre (US\$ 1,041,508.05)	1,041,508.500.00	
Payable for Rubber Planting Project in Sch-6.1	27,598,211.98	
	<u>10,222,636,155.98</u>	
17 Revenue		21,830,517,532.00
Relevant Documents for Operating Income were presented by B.O.D but some income were provided by credit vouchers only.		
18 Operating Expenses		20,470,645,025.61
Relevant Vouchers for Operating Expenses were presented by B.O.D but some expenses were provided by debit vouchers only.		
19 Administrative Expenses		178,230,834.00
Relevant Vouchers for Operating Expenses were presented by B.O.D but some expenses were provided by debit vouchers only.		



营业执照

(副本)

2-1

统一社会信用代码 913702121654224203

名称 山东电力建设第三工程有限公司
类型 有限责任公司(非自然人投资或控股的法人独资)
住所 青岛市崂山区同安路882-1号

法定代表人 王鲁军

注册资本 壹拾贰亿柒仟万元整

成立日期 1991年08月21日

营业期限 1991年08月21日至 年 月 日

经营范围 普通货运(依据交通部门核发的《道路运输经营许可证》开展经营活动), 电力工程施工总承包特级, 建筑工程施工总承包二级, 市政公用工程施工总承包三级, 环保工程专业承包一级, 石油化工工程施工总承包三级, 消防设施工程专业承包二级, 工程设计电力行业甲级, 锅炉的安装、改造(Ⅰ级), 压力管道的安装(依据质监部门核发的许可证开展经营活动), 起重机械的安装、维修(依据质监部门核发的许可证开展经营活动), 设备监理, 承装(修、试)电力设施许可承装类一级、承修类一级、承试类一级, 承包境外火电工程和境内国际招标工程, 上述境外工程所需的设备、材料出口, 对外派遣实施上述境外工程所需的劳务人员, 自营和代理各类商品及技术的进出口业务(法律行政法规禁止类项目不得经营, 法律行政法规限制类项目许可后经营), 电力工程、建筑、铁路、公路桥梁工程项目设计、咨询。(以上范围需经许可经营的, 须凭许可证经营)。



登记机关



2017 年 12 月 27 日

请于每年1月1日至6月30日通过企业信用信息公示系统提交年度报告

Business License

(Duplicate)

2-1

Unified Social Credit Code: 913702121654224203

Name	SEPCOIII Electric Power Construction Co., Ltd.
Type	Limited Liability Company (sole proprietorship of legal person and not non-natural person investment or holding)
Address	No. 882-1 Tong'an Road, Laoshan District, Qingdao
Legal representative	Wang Lujun
Registered capital	1,270,000,000 RMB
Date of establishment	August 21 st , 1991
Term of operation	August 21 st , 1991 to
Scope of business	General freight (the operation activities are carried out according to the Road Transportation Operation Permit issued by the Transport Sector), super level general contracting of power engineering construction, Level II general contracting of building construction engineering construction, Level III general contracting of municipal public engineering construction, Level I specialized contracting of environmental engineering, Level III general contracting of petrochemical engineering construction, Level II specialized contracting of fire-fighting facilities engineering, Level A for engineering design in power industry, installation and improvement of boiler (Level 1), installation of pressure pipe, installation and maintenance of hoisting machinery, equipment supervision, installation (maintenance and testing) of power facilities: Level 1 qualification for installation, maintenance and testing, contracting overseas thermal power engineering and domestic international bidding engineering, export of equipment and materials required by above overseas engineering, foreign dispatch of labor required by implementing above overseas engineering, self-management of agency of imports and exports of various commodities and technologies (not allowed to operate items forbidden by laws, regulations and rules, and operate items limited by laws, regulations and rules after obtained the permit), and design and consult of electric power engineering, building, railway, highway and bridge engineering. (The item as mentioned above needing a permit shall be operated after the permit is obtained).

Registration Authority

Market Supervision Administration of Laoshan District, Qingdao

December 27th, 2017

Website for enterprise credit information publicity system: Supervised by State Administration for Industry & Commerce of the People's Republic of China

<http://sdxy.gov.cn>

企业名称变更核准通知书

(鲁)名称变核内字[2017]第009529号

山东电力建设第三工程公司：

你局送审的企业名称变更登记材料收悉。经审查，核准该企业名称变更为：山东电力建设第三工程有限公司

(行业：电力、热力、燃气及水生产和供应业|D 代码：火力发电|4411)。

申请的经营围：

普通货运(依据交通部门核发的《道路运输经营许可证》开展经营活动)，电力工程施工总承包一级，房屋建筑工程施工总承包三级，市政公用工程施工总承包三级，环保工程专业承包一级，管道工程专业承包三级，消防设施工程专业承包三级，火电建筑安装施工(一级)：30层以下、30米跨度以下的房屋建筑、高度100米以下的构筑物的建筑施工，起重机械施工，升降机安装及维修，水利水电施工二级和建设装饰三级，承包境外火电工程和境内国际招标工程，上述境外工程所需的设备、材料出口，对外派遣实施上述境外工程所需的劳务人员，自营和代理各类商品及技术的进出口业务(法律行政法规禁止类项目不得经营，法律行政法规限制类项目许可后经营)，电力工程、建筑、铁路、公路桥梁工程项目设计、咨询。(以上范围需经许可经营的，须凭许可证经营)。

同时核准以该企业为核心企业组建的企业集团名称为：

以上名称在企业登记机关核准变更登记，换发营业执照后生效。



- 注：1. 名称变更核准的有效期限为6个月，有效期满，核准的名称自动失效。
2. 企业名称涉及法律、行政法规规定必须报经审批项目，未能提交审批文件的，登记机关不得以本通知书的企业名称登记。
3. 企业变更登记时，登记机关应当将本通知书存入企业档案。
4. 企业登记机关应在核准企业变更登记、企业集团设立(变更)登记之日起30日内，将加盖登记机关印章的《企业名称变更核准登记回执》及该企业营业执照复印件报送企业名称核准机关备案。企业应当在企业变更登记之日起30日内将加盖公章的企业营业执照复印件报送企业名称核准机关备案。未报送备案的，名称核准机关在有效期满三个月后将该名称作为未登记名称处理。

Enterprise Name Change Approval Notice

(Lu) MCBHNZ [2017] No. 009529

SEPCOIII Electric Power Construction Corporation:

The registration material of the company name change has been received. After examination, it is allowed to change the name of this enterprise to: **SEPCOIII Electric Power Construction Co., Ltd.**

(Industry: **production and supply of power, thermal power, gas and water**) [D Code: **HLFD**] 4411).

Applied business scope:

General freight (the operation activities are carried out according to the Road Transportation Operation Permit issued by the Transport Sector), Level I general contracting of power engineering construction, Level III general contracting of building construction engineering construction, Level III general contracting of municipal public engineering construction, Level I specialized contracting of environmental engineering, Level III specialized contracting of pipeline engineering, Level III specialized contracting of fire-fighting facilities engineering, construction and installation of thermal power building (Level I): construction of house buildings under 30 floors and 30 meters span and structures under 100 meters high, construction of hoisting machinery, installation and maintenance of lift, Level II water conservancy and hydropower construction and Level III construction decoration, contracting overseas thermal power engineering and domestic international bidding engineering, export of equipment and materials required by above overseas engineering, foreign dispatch of labor required by implementing above overseas engineering, self-management of agency of imports and exports of various commodities and technologies (not allowed to operate items forbidden by laws, regulations and rules, and operate items limited by laws, regulations and rules after obtained the permit), and design and consult of electric power engineering, building, railway, highway and bridge engineering. (The item as mentioned above needing a permit shall be operated after the permit is obtained).

Furthermore, it is allowed that the Group established with this enterprise as the core enterprise uses the following name:

The above mentioned name shall take into effect upon the issuing of business license after the change of registration is examined and approved by the enterprise registration authority.

State Administration Bureau for Industry and Commerce, Qingdao
Seal for Enterprise Name registration management
(12)

October 27th, 2017

Notes:

1. The period of validity for an enterprise name approved by this Notice shall be six months and will be cease to be valid automatically at the expiry of the period of validity.
2. Where the name of the enterprise to be established involves the provisions of laws

and administrative regulations under which a report for examination and approval must be made and the document of the examination and approval cannot be submitted, the registration organ shall not register the enterprise name approved in this Notice.

3. If the enterprise changes the registration, the registration organ shall record this Notice in the enterprise file.
4. Within 30 days from the approval of the enterprise change registration and enterprise group establishment (change) registration, the registration organ shall submit the Receipt of Enterprise Name Change Approval Registration affixed with the seal of the registration organ and copies of the business license of the enterprise to the enterprise name approval authority for filing. Within 30 days from the day of the enterprise change registration, the enterprise shall submit the copies (with company seal) of Enterprise Business License to the enterprise name approval authority for filing. If such materials are not submitted for filing, the enterprise name approval authority will treat this name as an unregistered name after three months from the expiration of the period of validity.

公 证 书

中华人民共和国山东省青岛市市中公证处

山东电力建设第三工程公司章程

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第一章 总 则

第一条为适应发展社会主义市场经济，规范企业的组织和行为，依据《中华人民共和国全民所有制工业企业法》、《中华人民共和国企业法人登记管理条例》及其他有关规定，制定本章程。

第二条本企业名称：

中文：山东电力建设第三工程公司（以下称“企业”）

英文：SEPCOIII ELECTRIC POWER CONSTRUCTION CORPORATION
(SEPCOIII)

企业住所：山东省青岛市市南区鞍山路2-1号

邮政编码：266100

第三条企业是由中国电力建设集团有限责任（以下称“投资者”）投资设立的全民所有制企业。

第四条企业注册资本为人民币肆亿柒仟万圆。

第五条企业依法登记注册，具有企业法人资格，企业依法自主经营，独立核算，自负盈亏的法人实体。

第六条中国共产党基层组织在企业中的活动，按照《中国共产党章程》进行，企业党组织发挥政治核心作用，保证、监督党和国家方针政策在企业内贯彻执行。

第七条企业依法建立工会组织，开展工会活动，企业为工会提供必要的活动条件，企业通过职工代表大会和其他形式，实行民主管理。企业保护职工的合法权益，加强劳动保护，提高职工素质。

第二章 企业的经营范围和经营方式

第八条经营范围：

许可经营项目：普通货运

一般经营项目：电力工程施工总承包一级，房屋建筑工程施工总承包三级，市政公用工程施工三级，环保工程专业承包一级，管道工程专业承包三级，消防设施工程专业承包三级，

火电建筑安装施工（一级）；30 层以下、30 米跨度以下的房屋建筑，高度 100 米以下的构筑物的建筑施工，起重机械施工，升降机安装及维修，水利水电施工二级和建筑安装三级，承包境外火电工程和境内国际招标工程，上述境外工程所需的设备、材料出口，对外派遣实施上述境外工程所需的劳务人员，自营和代理各类商品及技术的进出口业务（法律行政法规禁止类项目不得经营，法律行政法规限制类项目许可后经营）。

经营范围以审批机关和登记机关核准的范围为准，根据需要，可依法变更。

第九条企业的经营期限为：长期。

第三章组织机构

第十条投资者行使下列职权：

- （一）任免企业法定代表人；
- （二）审议批准企业的章程；
- （三）审议批准企业的利润分配方案和弥补亏损方案；
- （四）对企业增加或减少注册资本作出决议；
- （五）审议企业转让出资和办理财产转移手续；
- （六）对企业的合并、分立、解散、破产和清算作出决议；
- （七）对企业的财产实施监督管理。

第十一条企业设总经理 1 人，副总经理若干人，根据需要设总工程师、总会计师及其他高级管理人员。

企业党委、纪委、工会组织机构和领导人员按照《中国共产党章程》、《工会法》和有关规定办理。

第十二条总经理是企业法定代表人，由投资者任命，副总经理由总经理提名，投资者任命。

第十三条总经理行使下列职权：

行使企业法定代表人职权，对外代表企业，签署企业文件，按照国家法律法规规章和上级机关的规定行使法定职权和管理职权。

- （一）决定企业的经营计划；
- （二）制定企业的年度财务预算方案决算方案；
- （三）制定企业的利润分配方案和弥补亏损方案；
- （四）制定企业增加或减少注册资本方案；

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(五) 拟定企业合并、分立、变更、解散方案;

(六) 决定企业内部管理机构设置;

(七) 聘任、解聘企业中层领导干部;

(八) 主持企业经营管理。

第四章 职工和职工代表大会

第十四条 职工享有法律规定的权利和义务。

第十五条 职工应当以国家主人翁的态度从事劳动。遵守劳动纪律和规章制度, 完成生产工作任务。

第十六条 职工代表大会是企业实行民主管理的基本形式, 是职工行使民主管理权利的机构。

第十七条 职工代表大会按照《全民所有制工业企业职工代表大会条例》行使职权。

第五章 财务管理制度

第十八条 企业依照国家法律、法规和有关部门的规定建立财务会计制度, 缴纳各种税、费、基金。

第十九条 企业建立统一的财务管理体系, 实行统一的财务管理办法, 企业遵守财务制度, 加强财务纪律。

(一) 做好成本核算与成本管理的各项基础工作, 正确核算成本费用, 合理计提固定资产折旧, 按规定计提和摊销费用, 计提和处理资产损失。

(二) 开展目标成本管理。

(三) 加强资金的监督和控制, 建立全面预算管理制度, 确保财务会计报告真实、完整, 建立健全财务报表内部管理制度。

(四) 加强财务审计。

第二十条 企业采用借贷记账法记账。本位币为人民币。

第二十一条 企业会计年度采用公历年制, 自公历每年1月1日至12月31日为一个会计年度。

第二十二条 企业设置内部审计机构, 对企业账目和经济活动进行内部审计、监督。

第二十三条 企业依法进行税务登记, 缴纳各项税款。



第六章劳动用工制度

第二十四条本企业劳动用工执行国家和上级单位有关政策规定。在标准规定范围内，采取符合本企业实际的用工形式。

第二十五条本企业贯彻按劳分配原则，实行多劳多得的分利制度。

第二十六条本企业职工的劳动保护、医疗、养老退休等按国家规定办理。

第七章停止和清算

第二十七条企业丧失偿还能力不能清偿到期债务的，依法宣告破产。

第二十八条企业有下列情况之一时，应当解散：

- (一) 发生严重亏损，无力继续经营者；
- (二) 因不可抗力而遭受严重损失，无法继续经营者；
- (三) 因合并或分立而解散的。

上述任何一种情况发生后，应报经主管部门批准解散。

第二十九条企业破产或解散时，企业应提出清算程序、原则，并成立清算机构，依照法律，依法履行程序，事项进行清算。

清算结束后，清算机构应提出清算报告经投资者确认，并向登记机关办理注销登记手续，缴回营业执照。印鉴。

第八章章程的修改、订立和生效

第三十条企业章程修改，应经上级主管单位批准后，方能生效。企业发生严重亏损，无力继续经营，或因不可抗力而遭受严重损失，无法继续经营时，企业应提出清算程序、原则，并成立清算机构，依照法律，依法履行程序，事项进行清算。

第三十一条本章程与国家法律政策相抵触的，以国家法律政策为准。企业发生注销、变更登记事项的，以登记机关核准的为准。

本章程自工商行政管理部门核准登记之日起生效。



章程修正案

依据山东电力建设第三工程公司章程修改规定，经本企业党政联席会议决议，对本公司章程作如下修改：

第二条：英文名称修改为：

英文：SEPCOIII ELECTRIC POWER CONSTRUCTION CORPORATION
(SEPCOIII)

第八条：经营范围修改为：

许可经营项目：普通货运

一般经营项目：电力工程施工总承包一级，房屋建筑工程施工总承包三级，市政公用工程施工三级，环保工程专业承包一级，管道工程专业承包三级，消防设施工程专业承包三级，火电建筑安装施工（一级）；30层以下、30米跨度以下的房屋建筑、高度100米以下的构筑物的建筑施工，起重机械施工，升降机安装及维修，水利水电施工二级和建设装饰三级，承包境外火电工程和境内国际招标工程，上述境外工程所需的设备、材料出口，对外派遣实施上述境外工程所需的劳务人员，自营和代理各类商品及技术的进口业务。电力、建筑、铁路、公路、桥梁工程项目的咨询、设计。（法律行政法规禁止类项目不得经营，法律行政法规限制类项目许可后经营）。

经营范围以审批机关和登记机关核准的范围为准，根据需要，可依法变更。

法定代表人签字：



章程修正案

依据《公司法》、《公司登记管理条例》和山东电力建设第三有限公司章程修改规定，经本公司股东会研究决定，对本公司章程作如下修改：

第 条：公司名称修改为：_____有限公司；

第 条：公司住所修改为：青岛市崂山区____路____号____室；

第 条：经营范围修改为：

第 条：公司注册资本修改为 127000 万元；

公司实收资本修改为 127000 万元；

第 条：股东修改为：

中国电力建设集团有限公司

出资额

出资方式

出资时间

127000万元

货币

2017.10.18

第 条：营业期限修改为：____年____月____日

法定代表人签字：



(公章)



2017年11月2日

公 证 书

(2017)青市中证字第 027235 号

申请人：山东电力建设第三工程公司，住所：青岛市崂山区同安路882-1号。

法定代表人：王鲁军，男，一九六三年九月十七日出生，公民身份号码：370112196309179910。

公证事项：复印件与原件相符

兹证明前面的复印件与青岛市崂山区市场监督管理局登记备案的《山东电力建设第三工程公司章程》相符。

中华人民共和国山东省青岛市市中公证处

公证员

刘娜



二〇一七年十二月六日

ARTICLES OF ASSOCIATION
OF
SEPCOIII ELECTRIC POWER CONSTRUCTION CORPORATION

CHAPTER 1 GENERAL

ARTICLE 1 For the purpose of adaption to developing socialist market economy and regulating enterprise organization and behavior, these ARTICLES OF ASSOCIATION is hereby formulated in accordance with *the Law of the People's Republic of China of Industrial Enterprises Owned by the Whole People, the Administrative Regulations of the People's Republic of China Governing Registration of Legal Corporations* as well as other provisions.

ARTICLE 2 Name of the Enterprise:

Chinese Name: 山东电力建设第三工程公司 (hereinafter referred to as “Enterprise”)

English Name: SEPCOIII ELECTRIC POWER CONSTRUCTION CORPORATION (hereinafter referred to as “SEPCOIII”)

Address: 882-1, Tong'an Road, Laoshan District, Qingdao City, Shandong Province 266100

ARTICLE 3 This Enterprise is an enterprise owned by the whole people, established with the investment of POWER CONSTRUCTION CORPORATION OF CHINA (hereinafter referred to as “the Investor”).

ARTICLE 4 This Enterprise's registered capital is RMB four hundred and seventy million only.

ARTICLE 5 This Enterprise is registered by law with qualification of Legal Corporation. This Enterprise is a legal entity for autonomous operation, independent accounting and assuming sole responsibility for profit and loss by operation of law.

ARTICLE 6 The activity of CCP grass-roots organizations in this Enterprise shall be carried out in accordance with *the Constitution of the Communist Party of China*. This Enterprise's party organization shall act as the political nucleus to ensure and

supervise implementation of party and state policies in this Enterprise.

ARTICLE 7 This Enterprise establishes a Trade Union to carry out relevant activities and provide necessary conditions for such activities. This Enterprise implements democratic management through congress of workers and staff and other forms. This Enterprise safeguards staff legal right, strengthen occupational protection and improve staff quality.

CHAPTER 2 BUSINESS SCOPE AND OPERATION METHOD

ARTICLE 8 Business Scope:

Licensed Operation Items: Ordinary cargo delivery

Common Operation Items: First-grade EPC for electric power project, third-grade contractor for civil construction, third-grade contractor for Municipal Utilities Project, first-grade for environmental engineering project, third-grade contractor for pipeline project, third-grade contractor for fire-fighting engineering project, thermal power plant construction installment and erection (first-grade), construction for building under 30 floors and within 30 meters wide, construction for structure below 100 meters high, installation for hoist equipment, installation and maintenances for lifting equipment, second-grade construction and third-grade fitment for water conservancy electric power plant, contractor for overseas thermal electric power plant and international project, facility and materials export for overseas projects above, personnel sent to overseas for projects above, various kinds of products and technology import and export for self-operation and surrogating general material delivery (those items, which are prohibited by administrative laws and regulations, may not be operated, and which are limited, shall be operated after getting a license).

The business scope shall be subject by the scope approved by approval authority and registration authority, and can be legally altered if necessary.

ARTICLE 9 Operation Term: Long-Term

CHAPTER 3 ORGANIZATIONAL STRUCTURE

ARTICLE 10 The Investor shall exercise the following powers:

- (1) To appoint and dismiss the legal representative of this Enterprise;
- (2) To review and approve these Articles of Association;
- (3) To review and approve profit distribution and loss coverage plan of this Enterprise;
- (4) To decide the increase or decrease of registered capital of this Enterprise;
- (5) To review contribution transfer and go through assets transfer formalities for this Enterprise;
- (6) To decide merger, division, dissolution, bankrupt and liquidation of this Enterprise;
- (7) To supervise and manage assets of this Enterprise;

ARTICLE 11 This Enterprise shall establish one General Manager, several deputy general managers, Chief Engineer, Chief Accountant and other senior officers as required.

The Party Committee, Discipline Inspection Commission, Trade Union and leaders of this Enterprise shall be established in accordance with *the Constitution of the Communist Party of China, the Trade Union Law* as well as other regulations.

ARTICLE 12 The General Manager, appointed by the Investor, is the Legal Representative of this Enterprise. The deputy general managers shall be nominated by the General Manager and appointed by the Investor.

ARTICLE 13 The General Manager shall exercise the following powers:

To exercise the power as the Legal Representative and sign legal instruments for and on behalf of this Enterprise, exercise the legal and managerial power in accordance with national laws and regulations and superior authority.

- (1) To decide the operation plan of this Enterprise;
- (2) To formulate annual financial budget and final settlement plan;
- (3) To formulate profit distribution and loss coverage plan of this Enterprise;
- (4) To formulate registered-capital increase or decrease plan of this Enterprise;
- (5) To prepare merger, division, alteration and dissolution plan of this Enterprise;
- (6) To decide on establishment of internal managerial organization;
- (7) To appoint and dismiss middle-rank leadership of this Enterprise;

(8) To preside over operation and management affairs of this Enterprise.

CHAPTER 4 THE STAFF AND CONGRESS OF WORKERS AND STAFF

ARTICLE 14 The staff members shall have statutory rights and obligations.

ARTICLE 15 The staff shall work with the attitude as a state master, abide by labor discipline and regulations, and accomplish their assignment in production and work.

ARTICLE 16 The Congress of Workers and Staff is the basic form of this Enterprise for democratic administration and the institution for the staff in execution of power.

ARTICLE 17 The Congress of Workers and Staff shall perform its power and functions in accordance to *the Regulations of Industrial Enterprises Owned by the Whole People on Congress of Workers and Staff*.

CHAPTER 5 FINANCIAL MANAGEMENT SYSTEM

ARTICLE 18 This Enterprise shall establish financial and accounting system and make payment of all taxes, fees and funds in accordance with the national laws and regulations or provisions made by competent authorities.

ARTICLE 19 This Enterprise shall establish a unified financial management system, and follow unified financial management measures. This Enterprise shall abide by financial regulations and reinforce financial discipline.

(1) Doing well in all basic works such as cost accounting and management, making correct accounting of cost, making reasonable provision on depreciation of fixed assets, withholding and amortizing expenses as required, and making provision and disposing capital loss.

(2) Conducting targeted cost management.

(3) Strengthening capital supervision and control, building comprehensive budget management system, and ensuring authenticity and integrity of financial and accounting reports, building an integrated internal management system of financial statements.

(4) Strengthening financial audit.

ARTICLE 20 This Enterprise shall apply debit-credit bookkeeping method and

standard currency is RMB.

ARTICLE 21 The fiscal year of this Enterprise shall be Gregorian calendar, and the fiscal year of this Enterprise is from January 1 to December 31 of each calendar year.

ARTICLE 22 This Enterprise shall set an internal auditing institution to conduct internal auditing and supervision on enterprise accounts and economic activities.

ARTICLE 23 This Enterprise shall go through registration with taxation authorities and pay all duties or taxes by law.

CHAPTER 6 LABOR EMPLOYMENT SYSTEM

ARTICLE 24 This Enterprise shall employ labors in accordance with the state laws and regulations as well as policies made by parent company, and use employment form in compliance with the actual situation of this Enterprise.

ARTICLE 25 This Enterprise shall follow the principle of distribution based on work performance and conduct such distribution system of more pay for more work.

ARTICLE 26 This Enterprise shall deal with labor protection, health insurance and endowment insurance in accordance with the national regulations.

CHAPTER 7 TERMINATION AND LIQUIDATION

ARTICLE 27 This Enterprise shall be declared bankrupt by law in case of insolvency or incapability in service of matured debt.

ARTICLE 28 This Enterprise shall declare dissolution upon any one of the following circumstances:

- (1) Heavy loss leading to failure to continue operation;
- (2) Heavy loss arising from force majeure and leading to failure to continue operation;
- (3) Being dissolved for merger or division.

Any one of the above circumstances should be reported to the Investor for approval of dissolution.

ARTICLE 29 This Enterprise should propose liquidation procedures and principles, and establish a liquidation institution for the purpose of liquidation in compliance

with law and regulations.

Upon completion of liquidation, the institution shall make a liquidation report, which shall be submitted to the Investor for confirmation, and then this Enterprise shall apply to the registrar for cancellation and return business license and company seal.

CHAPTER 8 AMENDMENTS, FORMATION AND VALIDITY OF THESE ARTICLES OF ASSOCIATION

ARTICLE 30 The amendment to these Articles of Association should become valid only with the approval from superior authorities in charge. These Articles of Association shall be cancelled with the approval from superior authorities in case of force majeure leading to unenforceability of these Articles of Association or heavy loss leading to failure to continue operation.

ARTICLE 31 The national laws and regulations or policies shall prevail in case of any conflict with these Articles of Association, and those approved by registration authority shall prevail in case that the registration proceedings for corporation are involved.

These Articles of Association shall come into force as of the date of approval for registration by the Administration for Industry and Commerce.

SEPCOIII Electric Power Construction Corporation

Amendment for **ARTICLES OF ASSOCIATION**

On the basis of the Articles of Association modification rules of SEPCOIII Electric Power Construction Corporation, The party and the association results to make the following modification for the Articles of Association:

Item 2: the English name changed to:

English name: SEPCOIII Electric Power Construction Corporation (SEPCOIII)

Item 8: Business Scope changed to:

Licensed Operation Items: Ordinary cargo delivery

Common Operation Items: First-grade EPC for electric power project, third-grade contractor for civil construction, third-grade contractor for Municipal Utilities Project, first-grade for environmental engineering project, third-grade contractor for pipeline project, third-grade contractor for fire-fighting engineering project, thermal power plant construction installment and erection (first-grade), construction for building under 30 floors and within 30 meters wide, construction for structure below 100 meters high, installation for hoist equipment, installation and maintenances for lifting equipment, second-grade construction and third-grade fitment for water conservancy electric power plant, contractor for overseas thermal electric power plant and international project, facility and materials export for overseas projects above, personnel sent to overseas for projects above, various kinds of products and technology import and export for self-operation and surrogating general material delivery. Consulting and engineering work for power project, architecture, railway, road and bridge engineering work. (Those items, which are prohibited by administrative laws and regulations, may not be operated, and which are limited, shall be operated after getting a license).

The business scope shall be subject by the scope approved by approval authority and registration authority, and can be legally altered if necessary.

Legal Representative:

Seal:

Wang Lujun

Date:

Amendment for ARTICLES OF ASSOCIATION

On the basis of Company Law, Registration of Companies Ordinance and the Articles of Association modification rules of SEPCOIII Electric Power Construction Corporation, Board of Shareholders made the following modification for the Articles of Association:

- Item__: the English name changed to: _____ limited company;
Item__: location changed to: Room No. __, No. __, __ Road, Laoshan District, Qingdao.
Item__: business Scope changed to:
Item__: registered capital changed to 1,270,000,000 Yuan;
paid-in capital changed to 1,270,000,000 Yuan
Item__: shareholder changed to: Power Construction Corporation of China
amount of investment: 1,270,000,000 Yuan
way of investment: currency
time of investment: Oct 18th, 2017
Item__: business term changed to: __ year __ month __ day

Legal Representative:

Seal: SEPCOIII Electric Power
Construction Corporation

Wang Lujun

Date: 20th Nov, 2017

NOTARIAL CERTIFICATE

(2017)QD.Shi Zhong Zi, No.027235

Applicant: SEPCCIII Electric Power Construction Corporation,
Address: No.882-1, Tong'an Road, Laoshan District, Qingdao City.

Legal Representative: Wang Lujun, male, born on September 17,
1963, Citizen ID No.370112196309179910.

Issue under notarization: True and Exact Copy

This is to certify that the duplicate copy attached hereto is in
conformity with the original copy of SEPCCIII Electric Power
Construction Corporation's Articles of Association registered and filed at
Market Supervision Administration of Laoshan District, Qingdao.

Notary: Liu Na

Qingdao Shizhong Notary Public Office

Shandong Province

The People's Republic of China

December 6, 2017

公 证 书

中华人民共和国山东省青岛市市中公证处

公司组织机构图

公司领导



公 证 书

(2017)青市中证字第 027234 号

申请人：山东电力建设第三工程公司，住所：青岛市崂山区同安路882-1号。

法定代表人：王鲁军，男，一九六三年九月十七日出生，
公民身份号码：370112196309179910。

公证事项：复印件与原件相符

兹证明前面的复印件与山东电力建设第三工程公司的
《公司组织机构图》原件相符。

中华人民共和国山东省青岛市市中公证处

公证员

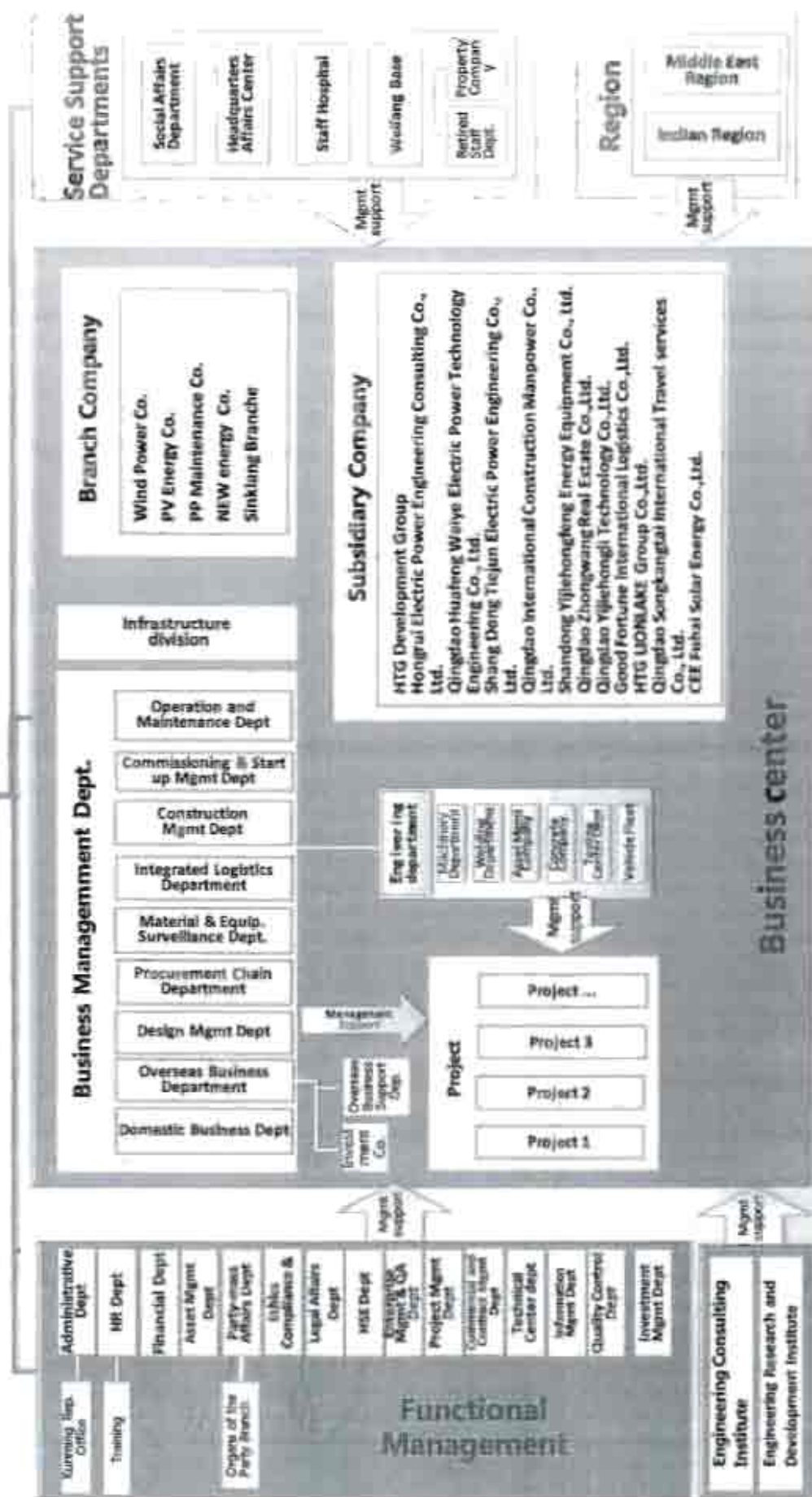
刘娜

二〇一七年十二月六日



Company Organisation Chart

Chairman Board of Directors



NOTARIAL CERTIFICATE

(2017)QD.Shi Zhong Zi, No.027234

Applicant: SEPCOIII Electric Power Construction Corporation,
Address: No.882-1, Tong'an Road, Laoshan District, Qingdao City.

Legal Representative: Wang Lujun, male, born on September 17,
1963, Citizen ID No.370112196309179910.

Issue under notarization: True and Exact Copy

This is to certify that the duplicate copy attached hereto is in
conformity with the original copy of SEPCOIII Electric Power
Construction Corporation's Company Organization Chart.

Notary: Liu Na

Qingdao Shizhong Notary Public Office

Shandong Province

The People's Republic of China

December 6, 2017

SEPCOIII ELECTRIC POWER
CONSTRUCTION CORPORATION

AUDITORS' REPORT

2016



中天运会计师事务所(特殊普通合伙)

JONTEN CERTIFIED PUBLIC ACCOUNTANTS

Contents

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AUDITORS'REPORT

Jontan [2017] Auditing No.01677

To SEPCOIII Electric Power Construction Corporation:

We have audited the attached financial statements of SEPCOIII Electric Power Construction Corporation(the company),which comprise the balance sheet as at 31 December of 2016, and the income statement, the cash flow statement and the statement of changes in owners' equity of the year for the year then ended.

Management Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements. The responsibility includes (1) preparing financial statements in accordance with the provisions of Accounting Standards for Business enterprises and fairly presenting the financial statements ; (2) devising, performing and maintaining a system of internal control sufficient to make sure the financial statements free from material misstatement, whether due to fraud or error;

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Chinese Certified Public Accountants Auditing Standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about amount and disclosures in the financial statements. The procedures selected depend on the auditor's judgments, including the assessment of the risks of material misstatement of financial statements, whether due to fraud or error. In making those risks assessment, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the

entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and reasonableness of accounting estimates made by management as well as evaluating the overall presentation of the financial statements. We believe evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements give a true and fair view of financial position of SEPCO

III Electric Power Construction Corporation as at 31 December of 2016, and of its financial performance and its cash flow for the year then ended in accordance with Chinese Accounting Standards for Business Enterprise and the Accounting System for Business Enterprises.

Jonten Certified Public Accountants Ltd. Certified Public Accountant of China



Handwritten signature in black ink, enclosed in a red rectangular box.

Beijing, China

Certified Public Accountant of China

Handwritten signature in black ink, enclosed in a red rectangular box.

28 April 2017



BALANCE SHEET

December 31, 2016

Prepared by: SEPCOIII Electric Power Construction corporation

Currency Unit : RMB yuan

Assets	31-Dec-16	31-Dec-15
Current Assets		
Monetary assets	4,353,742,154.30	3,100,385,472.27
Trading financial assets		
Notes receivable	55,804,325.02	11,004,347.00
Accounts receivable	1,284,167,148.37	1,641,175,131.47
Advance to suppliers	1,924,880,416.80	743,572,854.70
Dividend receivable	19,134,072.57	2,651,482.98
Interest receivable	185,458.75	
Other receivables	1,711,208,903.67	2,951,808,911.45
Inventories	1,234,580,594.79	2,615,678,049.65
Non-current assets due within one year	100,343.14	2,094,010.41
Other current assets	653,540,478.44	181,582,171.30
Sub-total of current assets	17,281,340,902.79	11,450,385,432.29
Non-current Assets		
Available-for-sale financial assets	95,481,010.00	7,481,010.00
Held-to-maturity investment		
Long-term receivables		
Long-term equity investment	934,798,389.63	930,368,375.87
Investment Property		
Net fixed-assets	257,385,014.81	191,385,812.51
Construction in progress		
Construction Materials		
Disposal of fixed assets	1,961,733.93	1,573,783.85
Productive living assets		
Oil and gas assets		
Intangible assets	15,135,659.14	11,742,918.12
Inc. Right to the use of land		
Development cost		
Goodwill		
Long-term prepaid expenses		103,342.14
Deferred income tax assets	10,207,678.36	12,747,348.78
Other non-current assets	388,854,133.14	636,071,032.89
Sub-total of non-current assets	1,721,132,318.01	1,781,431,913.28
Total assets	19,002,473,220.80	13,231,817,345.57

BALANCE SHEET (Continued)

December 31, 2016

Prepared by: SEPCOIII Electric Power Construction corporation

Currency Unit : RMB yuan

Liabilities and owners' equity	Note	31-Dec-16	31-Dec-15
Current Liabilities			
Short-term loans		360,000,000.00	
Trading financial liabilities			
Notes payable		1,213,400,657.23	955,908,690.28
Accounts payable		4,453,468,404.29	3,415,860,193.22
Advance from clients		5,825,522,699.14	2,619,341,782.40
Salaries and welfare payable		60,609,251.76	50,598,093.12
Taxes payable		137,377,603.42	162,452,943.80
Interests payable		63,604,166.66	60,825,000.00
Dividend payable		32,300,000.00	25,776,000.00
Other payables		925,817,011.83	461,497,648.82
Non-current liabilities due within one year		1,194,040,250.00	389,137,500.00
Other current liabilities			
Sub-total of current liabilities		14,125,360,643.55	8,291,387,851.64
Non-current Liabilities			
Long-term loans		1,894,000,000.00	2,496,630,200.00
Bonds payable		2,000,000,000.00	1,500,000,000.00
Long-term payable			
Special accounts payable			
Estimated liabilities			
Deferred income tax liabilities			
Other non-current liabilities			
Sub-total of non-current liabilities		3,894,000,000.00	3,996,630,200.00
Total liabilities		17,919,360,643.55	12,287,998,051.64
Owners' equity			
Paid-in capital		479,000,000.00	470,000,000.00
Capital surplus		6,563,000.00	2,700,000.00
Appropriation reserve			
Surplus reserve		163,622,185.55	86,115,666.44
inc: Statutory reserve		163,622,185.55	86,115,666.44
Other surplus reserve			
Undistributed profit		802,929,274.70	481,273,131.73
Exchange differences on translating foreign operations			
Total equity attributable to the shareholders of parent company			
Minority shareholders' equity			
Total owners' equity		1,345,512,379.25	1,040,488,897.17
Total liabilities and owners' equity		19,264,873,022.80	13,328,486,948.81

INCOME STATEMENTS

2016

Prepared by: SEPCOIII Electric Power Construction corporation

Currency Unit : RMB yuan

Items	2016	2015
1 Revenue	10,598,722,877.13	12,794,193,215.35
Inc: Revenue from main operations	10,597,539,658.26	12,703,917,215.35
Revenue from other operations	1,083,018.87	275,000.00
Less:		
Cost	9,896,418,929.95	11,882,932,370.72
Inc: Cost of main operations	9,896,418,929.95	11,882,922,408.92
Cost of other operations		9,961.80
Taxes and surcharge	-38,894,154.87	97,329,388.17
Operating expenses:		
General and administrative expenses	335,559,265.36	304,022,010.29
Financial expenses	282,656,714.75	196,047,942.71
Assets devaluation	-16,258,469.23	8,647,859.70
Add:		
The profit on the changes in fair value		
Investment income	35,819,708.60	38,650,735.18
2. Operating profit	(74,670,277.86)	253,864,378.94
Add:		
Non-operating revenue	3,736,155.35	7,071,151.51
Less:		
Non-operating expenditure	1,431,166.38	441,770.92
3. Income before tax	177,175,066.83	260,493,759.53
Less:		
Income tax	6,112,585.75	43,253,909.65
4. Net income	171,062,481.08	217,239,849.88
Less:		
Minority interest income		
5. Net income attributable to owners of the parent company	171,062,481.08	217,239,849.88

CASH FLOW STATEMENTS

2016

Prepared by: BEPCOIII Electric Power Construction corporation

Currency Unit: RMB yuan

Items	2016	2015
I. Cash flows from operating activities		
Cash received from the sale of goods or rendering of services	17,312,712,520.34	8,525,100,991.52
Refunds of taxes	113,886,768.85	185,865,105.41
Other cash receipts relating to operating activities	3,270,383,944.13	1,698,173,845.27
Sub-total of cash inflows	20,698,984,071.17	10,325,350,345.20
Cash paid for goods and services	14,423,082,141.90	6,814,436,945.38
Cash paid to and on behalf of employees	940,196,950.26	(95,576,900.32)
Payment of all types of taxes	125,286,535.41	745,403,485.55
Other cash payments relating to operating activities	3,219,354,607.29	(89,871,052.06)
Sub-total of cash outflows	19,468,328,234.21	8,079,182,985.66
Net cash flows from operating activities	1,230,655,836.96	2,246,167,359.54
II. Cash flows from investing activities		
Cash received from disposal of investments	276,000,000.00	
Cash received from return on investments	20,267,582.80	35,399,252.20
Cash received from disposal of subsidiaries or other business units		
Net cash received from disposal of fixed assets, intangible assets and other long-term assets	476,267.74	281,951.51
Other cash received relating to investing activities	25,041,422.74	224,661.25
Sub-total of cash inflows	328,796,297.88	36,005,864.96
Cash paid to acquire fixed assets, intangible assets and other long-term assets	130,575,845.11	33,325,975.98
Cash paid to acquire investments	92,435,111.95	696,856,032.38
Cash paid by disposal of subsidiaries or other business units		
Other cash payments relating to investing activities	901,245,688.92	289,377,575.92
Sub-total of cash outflows	1,744,351,871.80	1,026,663,847.90
Net cash flows from investing activities	-1,415,555,573.92	-990,657,982.94
III. Cash flows from financial activities		
Cash received from capital contribution	3,883,000.00	1,586,000.00
Cash received from borrowing	1,926,925,475.00	1,459,024,958.37
Cash received from issuing bonds	500,000,000.00	1,000,000,000.00
Other cash received relating to financial activities	180,000,000.00	700,000,000.00
Sub-total of cash inflows	3,398,808,475.00	2,645,509,958.37
Cash repayments of amounts borrowed	1,146,833,175.00	2,186,271,882.91
Cash payment for distribution of dividends or profits and for interest expenses	257,885,412.47	775,865,281.11
Other cash payments relating to financial activities	182,841,000.00	124,733.04
Sub-total of cash outflows	2,494,268,577.47	3,072,438,897.06
Net cash flows from financial activities	904,539,897.53	-346,928,938.69
IV. Effect of changes in foreign exchange rate on cash	114,373,103.53	1,022,000.00
V. Net increase in cash and cash equivalents	1,218,211,932.89	941,021,047.79

STATEMENT OF CHANGES IN OWNERS' EQUITY

2016

Prepared by: SEPCOR Electric Power Construction corporation

Currency Unit : RMB yuan

Items	31-Dec-16	31-Dec-15
I. Paid-in capital (or stock)		
Beginning balance	470,000,000.00	470,000,000.00
Increase in current year		
Inc. owner's appropriation		
Intra transfer from capital reserve		
Intra transfer from undistributed profit		
Ending balance	470,000,000.00	470,000,000.00
II. Capital surplus		
Beginning balance	1,700,000.00	1,700,000.00
Increase in current year		
Inc. Investment from owners	1,600,000.00	
Stock payment counted as capital		
Others		1,500,000.00
Decrease in current year		
Inc. Intra transfer to capital (or stock)		
Ending balance	3,300,000.00	3,200,000.00
III. Appropriation reserve		
Beginning balance		
Increase in current year	80,219,053.23	103,304,664.04
Inc. Security funds	80,219,053.23	103,304,664.04
Decrease in current year	80,219,053.23	103,304,664.04
Inc. Use of security funds	80,219,053.23	103,304,664.04
Ending balance		

STATEMENT OF CHANGES IN OWNERS' EQUITY

2016

Prepared by: SEPCOIII Electric Power Construction corporation

Currency Unit: RMB yuan

Items	31-Dec-16	31-Dec-15
IV. Surplus reserve		
Beginning balance	64,510,865.44	64,793,890.45
Increase in current year	17,106,236.11	21,723,984.99
Inc: Amount appropriated from net income	17,106,236.11	21,723,984.99
Inc: Statutory surplus reserve	17,106,236.11	21,723,984.99
Statutory welfare fund		
Investment from owners		
Reserve fund		
Enterprise development fund		
Decrease in current year		
Inc: Recovery of losses		
Conversion into capital (or stock)		
Investment out of owners		
Ending balance	81,617,101.55	86,517,875.44
V. Undistributed profit		
Undistributed profit at the beginning of year	481,273,131.73	308,567,266.84
Add:		
Adjustment to beginning balance		
Adjusted undistributed profit at the beginning of year	481,273,131.73	308,567,266.84
Add:		
Net income (or losses)	171,062,381.08	217,236,849.88
Income from other adjusted issues		
Less:		
Profit appropriation	49,405,236.11	44,533,984.99
Inc: Statutory surplus reserve	17,106,236.11	21,723,984.99
Appropriation to owners	32,300,000.00	22,810,000.00
Others		
Undistributed profit/losses at end of year	602,929,274.70	481,273,131.73



营业执照

(11-1)

(副 本)

统一社会信用代码 91110102089561664J

名 称 中天运会计师事务所(特殊普通合伙)

类 型 特殊普通合伙企业

主要经营场所 北京市西城区车公庄大街9号院1号楼1门701-704

执行事务合伙人 祝卫

成立日期 2013年12月13日

合伙期限 2013年12月13日至 长期

经营范围 审查企业会计报表,出具审计报告;验证企业资本,出具验资报告;办理企业合并、分立、清算事宜中的审计业务,出具有关报告;基本建设年度财务决算审计;代理记账;会计咨询、税务咨询、管理咨询、会计培训;资产评估;法律、法规规定的其他业务。(企业依法自主选择经营项目,开展经营活动;依法须经批准的项目,经相关部门批准后依批准的内容开展经营活动;不得从事本市产业政策禁止和限制类项目的经营活动。)



在北京市市场监督管理局备案

登记机关

2017



提示:每年1月1日至6月30日通过企业信用信息公示系统报送上一年度年度报告并公示。

证书序号: NO. 014580

说明

1. 《会计师事务所执业证书》是证明持有人经财政部门依法审批, 准予执行注册会计师法定业务的凭证。
2. 《会计师事务所执业证书》记载事项发生变动的, 应当向财政部门申请换发。
3. 《会计师事务所执业证书》不得伪造、涂改、出租、出借、转让。
4. 会计师事务所停止, 应当向财政部门交回《会计师事务所执业证书》。



中华人民共和国财政部制

会计师事务所 执业证书

名称: 中关通会计师事务所(特殊普通合伙)

主任会计师: 张中

办公场所: 北京市西城区车公庄大街8号院1号楼11701-704

组织形式: 特殊普通合伙

会计师事务所编号: 11000304

注册资本(出资额): 1000万元

批准设立文号: 京财证许字(2013) 0070号

批准设立日期: 2013-12-02



年度检验登记

本证书在有效期内有效。如过期一年，
This certificate is valid for another year when
this renewed.



2015年03月08日

年度检验登记

本证书在有效期内有效。如过期一年，
This certificate is valid for another year when
this renewed.



2015年03月08日

姓名: 王明
性别: 男
出生日期: 1972-10-18
身份证号: 370105197210180013
工作单位: 山东天恒会计师事务所有限公司
注册地址: 济南市经二路纬三路
联系电话: 170105197210180013

注册会计师工作单位变更事项登记

同意调出
Agree the holder to be transferred from



2015年7月17日

同意调入
Agree the holder to be transferred to



2015年7月17日

注册会计师工作单位变更事项登记

同意调出
Agree the holder to be transferred from

事务所
CPAs

转出协会盖章
Stamp of the transfer-out Institute of CPAs

同意调入
Agree the holder to be transferred to

事务所
CPAs

转入协会盖章
Stamp of the transfer-in Institute of CPAs

	姓名	孙宁
	性别	男
	出生日期	1954-01-01
	工作单位	北京中天恒会计师事务所有限责任公司
	身份证号	370302195401010047
	联系电话	
	电子邮箱	

北京中天恒会计师事务所
Beijing Zhong Tian Heng Accounting Firm

中天恒会计师事务所
Zhong Tian Heng Accounting Firm

本所经财政部批准，取得会计师事务所执业证书，执业许可证号为：京中恒会字[2004]第001号。
The firm is approved by the Ministry of Finance, and has obtained the license for the practice of accountancy, with the license number: Jing Zhong Heng Hui Zi [2004] No. 001.

2004年1月1日

北京中天恒会计师事务所
Beijing Zhong Tian Heng Accounting Firm

中天恒会计师事务所
Zhong Tian Heng Accounting Firm

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2004年1月1日



SEPCOIII ELECTRIC POWER
CONSTRUCTION CORPORATION

AUDITORS' REPORT

2015

中天运会计师事务所（特殊普通合伙）

JONTEN CERTIFIED PUBLIC ACCOUNTANTS (LIMITED LIABILITY PARTNERSHIP)

SEPCOIII ELECTRIC POWER
CONSTRUCTION CORPORATION

AUDITORS' REPORT

2015



中天运会计师事务所(特殊普通合伙)

JONTEN CERTIFIED PUBLIC ACCOUNTANTS

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AUDITORS'REPORT

Jonten [2016] Auditing No. 01198

To SEPCOIII Electric Power Construction Corporation:

We have audited the attached financial statements of SEPCOIII Electric Power Construction Corporation(the company),which comprise the balance sheet as at 31 December of 2015, and the income statement, the cash flow statement and the statement of changes in owners 'equity of the year for the year then ended.

Management Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements. The responsibility includes (1) preparing financial statements in accordance with the provisions of Accounting Standards for Business enterprises and fairly presenting the financial statements ; (2) devising, performing and maintaining a system of internal control sufficient to make sure the financial statements free from material misstatement, whether due to fraud or error;

Auditors 'Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Chinese Certified Public Accountants Auditing Standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about amount and disclosures in the financial statements. The procedures selected depend on the auditor's judgments, including the assessment of the risks of material misstatement of financial statements, whether due to fraud or error. In making those risks assessment, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the

entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and reasonableness of accounting estimates made by management as well as evaluating the overall presentation of the financial statements. We believe evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements give a true and fair view of financial position of SEPCO III Electric Power Construction Corporation as at 31 December of 2015, and of its financial performance and its cash flow for the year then ended in accordance with Chinese Accounting Standards for Business Enterprise and the Accounting System for Business Enterprises.

Jonien Certified Public Accountants Ltd. Certified Public Accountant of China

Beijing, China

Certified Public Accountant of China

18 March 2016



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Handwritten signature in red ink over a red square stamp.



BALANCE SHEET

December 31, 2015

Prepared by: SEPCOIII Electric Power Construction corporation

Assets	31-Dec-15	31-Dec-14
Current Assets		
Monetary assets	3,100,888,472.27	3,514,383,139.47
Trading financial assets		
Notes receivable	11,034,347.80	34,762,342.00
Accounts receivable	1,841,175,131.47	1,275,137,044.77
Advance to suppliers	740,572,854.70	660,673,526.28
Dividend receivable	2,651,462.98	
Interest receivable		
Other receivables	2,951,806,911.43	2,508,349,173.80
Inventories	2,815,670,048.85	2,988,670,185.42
Non-current assets due within one year	2,094,610.44	
Other current assets	181,502,171.36	111,090,310.18
Sub-total of current assets	11,456,265,432.29	11,203,585,621.72
Non-current Assets		
Available-for-sale financial assets	7,481,010.00	7,481,010.00
Held-to-maturity investment		
Long-term receivables		
Long-term equity investment	930,368,276.87	433,679,276.67
Investment Property		
Net fixed-assets	191,365,612.51	187,842,004.25
Construction in progress		
Construction Materials		
Disposal of fixed assets	1,373,753.85	1,137,724.68
Productive living assets		
Oil and gas assets		
Intangible assets	11,743,610.11	14,828,406.40
Inc: Right to the use of land	4,179,290.41	4,208,012.81
Development cost		
Goodwill		
Long-term prepaid expenses	100,342.14	8,676,340.40
Deferred income tax assets	12,747,948.71	79,084,716.31
Other non-current assets	638,611,032.41	544,740,881.73
Sub-total of non-current assets	1,791,451,616.53	1,315,255,342.46
Total assets	13,247,717,048.81	12,518,840,964.18

BALANCE SHEET (Continued)

December 31, 2015

Prepared by: SEPCOIII Electric Power Construction corporation

Liabilities and owners' equity	Note	31-Dec-15	31-Dec-14
Current Liabilities			
Short-term loans			1,519,174,900.43
Trading financial liabilities			
Notes payable		955,908,690.28	657,578,732.00
Accounts payable		3,415,960,193.22	2,816,036,840.35
Advance from clients		2,619,347,782.40	3,480,650,925.81
Salaries and welfare payable		50,698,093.12	39,057,107.54
Taxes payable		192,452,843.80	159,987,347.29
Interests payable		60,828,000.00	
Dividend payable		25,770,000.00	14,440,000.00
Other payables		491,497,648.82	368,186,066.76
Non-current liabilities due within one year		389,137,300.00	172,249,850.00
Other current liabilities			
Sub-total of current liabilities		8,201,587,851.64	9,247,661,770.18
Non-current Liabilities			
Long-term loans		2,409,631,200.00	1,020,034,946.71
Bonds payable		1,500,000,000.00	500,000,000.00
Long-term payable			
Special accounts payable			
Estimated liabilities			
Deferred income tax liabilities			
Other non-current liabilities			
Sub-total of non-current liabilities		3,909,631,200.00	2,426,634,946.71
Total liabilities		12,201,228,051.64	11,674,296,716.89
Owners' equity			
Paid-in capital		470,000,000.00	470,000,000.00
Capital surplus		2,700,000.00	1,200,000.00
Appropriation reserve			
Surplus reserve		86,515,855.44	64,791,330.45
Inc. Statutory reserve		86,515,855.44	64,791,330.45
Other surplus reserve			
Undistributed profit		481,273,131.73	306,967,292.54
Exchange differences on translating foreign operations			
Total equity attributable to the shareholders of parent company			
Minority shareholders' equity			
Total owners' equity		1,048,488,997.17	844,558,147.29
Total liabilities and owners' equity		13,249,717,048.81	12,518,854,864.18

INCOME STATEMENTS

2015

Prepared by: SEPCOIII Electric Power Construction corporation

Items	2015	2014
1. Revenue	12,704,193,215.35	13,271,752,643.17
Inc. Revenue from main operations	12,703,917,215.35	13,267,904,911.34
Revenue from other operations	276,000.00	3,847,731.83
Less:		
Cost	11,882,932,370.72	12,551,650,533.69
Inc. Cost of main operations	11,882,922,408.92	12,546,618,670.06
Cost of other operations	9,961.80	5,031,863.63
Taxes and surcharge	97,329,388.17	40,348,827.61
Operating expenses		
General and administrative expenses	304,022,010.29	410,958,580.90
Financial expenses	196,047,942.71	82,591,883.37
Assets devaluation	8,647,858.70	1,928,471.63
Add:		
The profit on the changes in fair value		
Investment income	38,650,735.16	57,035,549.48
2. Operating profit	253,864,378.94	241,309,915.45
Add:		
Non-operating revenue	7,071,151.51	4,582,700.22
Less:		
Non-operating expenditure	441,770.82	311,234.02
3. Income before tax	260,493,759.53	245,561,381.65
Less:		
Income tax	43,263,509.61	70,453,237.86
4. Net income	217,230,249.92	175,108,143.79
Less:		
Minority interest income		
5. Net income attributable to owners of the parent company	217,230,249.92	175,108,143.79

CASH FLOW STATEMENTS

2015

Prepared by: SEPCOIII Electric Power Construction corporation

Items	2015	2014
I. Cash flows from operating activities		
Cash received from the sale of goods or rendering of services	8,520,350,990.52	7,170,550,089.16
Refunds of taxes	186,986,105.41	93,994,332.81
Other cash receipts relating to operating activities	1,818,513,849.27	3,285,278,902.53
Sub-total of cash inflows	10,525,850,945.20	10,549,823,324.50
Cash paid for goods and services	6,614,438,555.89	6,657,260,188.10
Cash paid to and on behalf of employees	866,535,901.32	857,675,761.18
Payment of all types of taxes	745,603,489.59	385,656,237.11
Other cash payments relating to operating activities	851,601,659.06	5,353,816,859.02
Sub-total of cash outflows	9,076,182,005.86	13,254,411,055.41
Net cash flows from operating activities	1,449,668,939.34	-2,704,587,730.91
II. Cash flows from investing activities		
Cash received from disposal of investments		559,000,000.00
Cash received from return on investment	35,999,252.20	57,036,548.46
Cash received from disposal of subsidiaries or other business units		
Net cash received from disposal of fixed assets, intangible assets and other long-term assets	281,961.81	1,286,149.15
Other cash received relating to investing activities	224,881.25	16,678,416.87
Sub-total of cash inflows	36,505,864.96	632,999,115.30
Cash paid to acquire fixed assets, intangible assets and other long-term assets	53,595,976.98	50,789,533.81
Cash paid to acquire investments	496,686,000.00	
Cash paid to disposal of subsidiaries or other business units		
Other cash payments relating to investing activities	296,377,879.92	862,059,03
Sub-total of cash outflows	836,653,847.90	51,651,592.84
Net cash flows from investing activities	-800,157,982.94	581,347,522.46
III. Cash flows from financial activities		
Cash received from capital contribution	1,500,000.00	1,200,000.00
Cash received from borrowing	1,469,024,868.37	5,449,454,763.44
Cash received from issuing bonds	1,000,000,000.00	500,000,000.00
Other cash received relating to financial activities	200,000,000.00	110,000,000.00
Sub-total of cash inflows	2,669,524,868.37	6,660,654,763.44
Cash repayments of amounts borrowed	2,188,316,865.51	4,727,874,333.74
Cash payment for distribution of dividends or profits and for interest expenses	183,996,081.11	174,929,961.16
Other cash payments relating to financial activities	124,732.58	39,453,538.57
Sub-total of cash outflows	2,372,430,680.20	4,942,257,833.47
Net cash flows from financial activities	286,085,188.17	1,118,396,929.97
IV. Effect of changes in foreign exchange rate on cash	5,323,049.99	18,259,530.40
V. Net increase in cash and cash equivalents	943,121,194.76	-996,583,748.08

STATEMENT OF CHANGES IN OWNERS' EQUITY

2015

Prepared by: SEPCOIII Electric Power Construction corporation

Items		31-Dec-15	31-Dec-14
I. Paid-in capital (or stock)			
Beginning balance		470,000,000.00	470,000,000.00
Increase in current year			
Inc: owner's appropriation			
Intra transfer from capital reserve			
Intra transfer from undistributed profit			
Ending balance		470,000,000.00	470,000,000.00
II. Capital surplus			
Beginning balance		1,200,000.00	
Increase in current year			1,200,000.00
Inc: Investment from owners			
Stock payment counted as capital			
Others		1,200,000.00	1,200,000.00
Decrease in current year			
Inc: Intra transfer to capital (or stock)			
Ending balance		2,700,000.00	1,200,000.00
III. Appropriation reserve			
Beginning balance			
Increase in current year		103,354,664.04	
Inc: Security funds		103,354,664.04	
Decrease in current year		103,354,664.04	
Inc: Use of security funds		103,354,664.04	
Ending balance			

STATEMENT OF CHANGES IN OWNERS' EQUITY

2015

Prepared by: BEPCO Electric Power Construction corporation

Items	31-Dec-15	31-Dec-14
IV Surplus reserve		
Beginning balance	56,791,985.45	47,281,085.07
Increase in current year	21,723,984.99	17,510,814.36
Inc: Amount appropriated from net income	21,723,984.99	17,510,814.36
Inc: Statutory surplus reserve	21,723,984.99	17,510,814.36
Statutory welfare fund		
Investment from owners		
Reserve fund		
Enterprise development fund		
Decrease in current year		
Inc: Recovery of losses		
Conversion into capital (or stock)		
Investment out of owners		
Ending balance	86,515,965.44	64,791,899.45
V Undistributed profit		
Undistributed profit at the beginning of year	308,567,266.84	157,029,937.43
Add		
Adjustment to beginning balance		
Adjusted undistributed profit at the beginning of year	308,567,266.84	157,029,937.43
Add		
Net income (or losses)	217,232,845.86	175,188,143.79
Income from other adjusted issues		
Less		
Profit appropriation	44,323,954.26	22,510,814.36
Inc: Statutory surplus reserve	21,723,984.99	17,510,814.36
Appropriation to owners	22,610,000.00	6,000,000.00
Others		
Undistributed profits/losses at end of year	481,275,157.73	308,567,266.84



营业执照

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(副本)

统一社会信用代码 91110102089661064J

名称 中天运会计师事务所(特殊普通合伙)

类型 特殊普通合伙企业

主要经营场所 北京市西城区车公庄大街8号院1号楼1门701-704

执行事务合伙人 祝卫

成立日期 2013年12月13日

合伙期限 2013年12月13日至 长期

经营范围 审查企业会计报表、出具审计报告；验证企业资本，出具验资报告；办理企业合并、分立、清算事宜中的审计业务，出具有关报告；基本建设年度财务决算审计；代理记账；会计咨询、税务咨询、管理咨询、会计培训、资产评估；法律、法规规定的其他业务。（企业依法自主选择经营项目，开展经营活动；依法须经批准的项目，经相关部门批准后依批准的内容开展经营活动；不得从事本市产业政策禁止和限制类项目的经营活动。）



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03

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提示：每年1月1日至6月30日通过企业信用信息公示系统
报送上一年度年度报告并公示。



姓名: 张辉
 First Name: 张
 Surname: 辉
 身份证号: 1012-12-18
 Date of Birth: 1012-12-18
 工作单位: 中国注册会计师协会 (特约员)
 Workplace: 中国注册会计师协会
 手机号码: 1751071872/1108413
 Mobile: 1751071872/1108413

中国注册会计师
 Chinese Institute of Certified Public Accountants

中国注册会计师协会 注册公告
 Chinese Institute of Certified Public Accountants Association Registration Announcement

中国注册会计师
 Chinese Institute of Certified Public Accountants

中国注册会计师协会 注册公告
 Chinese Institute of Certified Public Accountants Association Registration Announcement

2018年03月05日



注册会计师工作单位变更事项登记
 Registration of the Change of Working Unit by a CPA

注册会计师工作单位变更事项登记
 Registration of the Change of Working Unit by a CPA

同意转出
 Agree the holder to be transferred out

同意转出
 Agree the holder to be transferred out

中文: 张辉
 (特约员) 张辉
 张辉
 2018年7月17日

张辉
 张辉
 张辉
 2018年7月17日

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 Agree the holder to be transferred in

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 (特约员) 张辉
 张辉
 2018年7月17日

张辉
 张辉
 张辉
 2018年7月17日



姓名: 孙国宁
性别: 男
出生日期: 1968-01-01
工作单位: 北京中天恒会计师事务所有限公司
身份证号: 37030219680101054

